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OM nucleic - nucleic search, using sw model

Run on: October 12, 2003, 11:43:37 ; Search time 113.333 Seconds  
(without alignments)  
9592.294 Million cell updates/sec

Title: US-09-610-313-31  
Perfect score: 2463  
Sequence: 1 gtcagccaccatgcccga.....gggctagccaggtgaattc 2463

Scoring table: IDENTITY\_NUC

Gapop 10.0 , Gapext 1.0

Searched: 569978 seqs, 220691566 residues

Total number of hits satisfying chosen parameters: 1139956

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued Patents NA: \*  
1: /cgn2\_6/ptodata/2/ina/5A\_COMB.seq.\*  
2: /cgn2\_6/ptodata/2/ina/5B\_COMB.seq.\*  
3: /cgn2\_6/ptodata/2/ina/6A\_COMB.seq.\*  
4: /cgn2\_6/ptodata/2/ina/6B\_COMB.seq.\*  
5: /cgn2\_6/ptodata/2/ina/PCUTS\_COMB.seq.\*  
6: /cgn2\_6/ptodata/2/ina/backfiles1.seq.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description
1	1651.8	67.1	4307	4	US-09-552-950-2
2	1624.6	66.0	9772	4	US-09-552-950-5
3	1203.6	48.9	9010	4	US-09-184-418C-8
4	1172.6	47.6	8972	4	US-09-184-418C-9
5	1165.4	47.3	8959	4	US-09-184-418C-11
6	1142	46.4	8992	4	US-09-184-418C-4
7	1106.8	44.9	2601	3	US-09-117-217-7
8	1106.8	44.9	2601	3	US-09-117-217-9
9	1106.8	44.9	2601	3	US-09-117-217-11
10	1106.8	44.9	2601	3	US-09-117-217-13
11	1106.8	44.9	2601	4	US-09-735-487-7
12	1106.8	44.9	2601	4	US-09-735-487-9
13	1106.8	44.9	2601	4	US-09-735-487-11
14	1106.8	44.9	2601	4	US-09-735-487-13
15	1106.8	44.9	4307	4	US-09-552-950-1
16	1106.8	44.9	9719	4	US-09-700-304-1
17	1105.2	44.9	9050	4	US-09-184-418C-7
18	1100.4	44.7	7399	2	US-08-418-848A-9
19	1100.4	44.7	9709	2	US-08-188-583-5
20	1100.4	44.7	9709	3	US-08-388-353-1
21	1100.4	44.7	9709	3	US-08-488-551B-1
22	1100.4	44.7	9709	4	US-09-309-572-15
23	1100.4	44.7	12479	4	US-09-348-138-13
24	1100.4	44.7	12494	3	US-08-935-312-13
25	1100.4	44.7	12494	3	US-08-848-760B-33
26	1100.4	44.7	15581	3	US-08-646-538-35
27	1100.4	44.7	15581	3	US-09-503-222-35

28	1099.2	44.6	3000	4	US-09-184-418C-74	Sequence 74, Appl
29	1095.8	44.5	8968	4	US-09-184-418C-1	Sequence 1, Appl
30	1090.8	44.3	9737	2	US-08-944-449-7	Sequence 7, Appl
31	1090.8	44.3	9737	4	US-09-353-362-7	Sequence 7, Appl
32	1082.8	44.0	8954	4	US-09-184-418C-6	Sequence 6, Appl
33	1077.6	43.8	3017	4	US-09-184-418C-83	Sequence 83, Appl
34	1075.4	43.7	3011	4	US-09-184-418C-101	Sequence 101, App
35	1063.4	43.2	8987	4	US-09-184-418C-2	Sequence 2, Appl
36	1060.4	43.1	8953	4	US-09-184-418C-3	Sequence 3, Appl
37	1060	43.0	9060	4	US-09-184-418C-10	Sequence 10, Appl
38	1055.6	42.9	9746	1	US-08-022-835-3	Sequence 3, Appl
39	1055.6	42.9	9746	1	US-08-388-809-3	Sequence 3, Appl
40	1055.6	42.9	9746	2	US-08-647-714-3	Sequence 3, Appl
41	1054.4	42.8	8932	3	US-09-124-900-1	Sequence 1, Appl
42	1054.4	42.8	8933	3	US-08-463-210-4	Sequence 4, Appl
43	1054.4	42.8	8933	3	US-09-620-958A-3	Sequence 3, Appl
44	1054.4	42.8	8933	3	US-09-620-958A-4	Sequence 4, Appl
45	1054.4	42.8	8933	3	US-09-620-958A-9	Sequence 9, Appl

ALIGNMENTS

RESULT 1  
US-09-552-950-2  
; Sequence 2, Application US/09552950  
; Patent No. 6541248  
; GENERAL INFORMATION:  
; APPLICANT: Oxford Biomedica (UK) Limited  
; TITLE OF INVENTION: Anti-Viral Vectors  
; FILE REFERENCE: 674524-2004  
; CURRENT APPLICATION NUMBER: US/09/552,950  
; CURRENT FILING DATE: 2000-04-20  
; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: Patent in Ver. 2.1  
; SEQ ID NO 2  
; LENGTH: 4307  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:gagpol-SYNGp - codon  
; OTHER INFORMATION: Optimised gagpol sequence  
US-09-552-950-2

Query Match	67.1%	Score	1651.8;	DB	4;	Length	4307;
Best Local Similarity	82.5%	Pred. No.	1.4e+262;	Indels	19;	Gaps	4;
Matches	1939;	Conservative	0;	Mismatches	391;		
QY	33	GGCCACCGCGCCAAACATCTCTGATGCGAGCGCAGCAAACTTCAAGGGCGCCCAAGCGCATCAT	92				
Db	1110	GACCAACTCCGCTACCATCATGATGATGAGCGCGCACTTTCGGAACCAACGCAAGATCGT	1169				
QY	93	CAAGTGCTTCAACTGCGGCAAGAGGCGCCACATCGGCCGCAACTGCGCGCCGCCCGCCGCAA	152				
Db	1170	CAAGTGCTTCAACTGCGGCAAGAGGCGCCACATCGGCCGCAACTGCGCGCCGCCCGCCGCAA	1229				
QY	153	GAGGGCTCTGAACTGGCGAGGAGGCGCCACCGATGAGGACTGCAACCGAGCCCA	212				
Db	1230	AAAGGGCTCTGAAATGCGGCAAGAGGCGCCACCGATGAGGACTGCAACCGAGAGACA	1289				
QY	213	GGCCAACTTCTTCCGCGAGGACCTGCGCTTCCCGGAGGCGCGCGAGTTCGCCAG	272				
Db	1290	GGCTAA-TTTTITAGGAAGATCTGCGCTTCTTACAGGAAGCGCAGGAATTTTCTTC	1348				
QY	273	CGAGCAGAACCGCGCCCAACAGCCCGCCAGCTGACGCT-----GGCGCGCA	326				
Db	1349	AGAGCAGAACCGCGCCCAACAGCCCGCCAGCTGACGCTCTGCGGTGCGCAAA	1408				
QY	327	CAACCCCGCAGGAGGCGCGCGCCAGCGCCAGGCA-----CCCTGACTTCCCCA	380				
Db	1409	CAACTCCCCCTCGAAGCAGGAGGCGCGCCAGCGCCAGGCA-----CCCTGACTTCCCCA	1468				
QY	381	GATCACCTGTGCGAGGCGCCCTCTGTGAGCATCAAGGTGGCGCGCCAGTCAAGGAGGC	440				

Db	1469	GGTCAAGCTTTGGACGACCCCTGTGTAACATCAAGATCCGGGGGACGTCAAGAGGC	1528
QY	441	CCTGCTGACACCGGCGCCGACGACACCGTGTGAGAGATGACCTGCCCCGCAATG	500
Db	1529	TCTCCTGGACACCGGACGACGACGACCGTGTGAGAGATGTGTGTCAGAGCGCTG	1588
QY	501	GAAGCCCAAGATGATCCGGCGCATGGGGGCTTCAAGAGTGGGCCGATGACACGAT	560
Db	1589	GAAGCCCAAGATGATCCGGGGGATGGGGGTTTCAAGAGTGGGCCGATGACACGAT	1648
QY	561	CCTGATCGAGATCTGCGGCAAGAGCCATGGCACTGCTGTGATTCGGCCCCACCCCGT	620
Db	1649	CCTCATCGAAATCTCGGCGCACCAAGGCTATCGGTACCGTGTGTTGGGCCCCACACCGT	1708
QY	621	GAACATCATCGGCGCCGACATGCTGACCCGATCGGACTGGGCTTGACACTTGAACTTCCCATAG	680
Db	1709	CAACATCATCGGACGCAACTGTGGACCAAGTCGGTTGACGCTGAACCTTCCCATTAG	1768
QY	681	CCCCATCGAGACCTGTGCGCGTGAAGCTGAAGCCGCGCATGAGACGGCCCCAAGTGAAGCA	740
Db	1769	CCCTATCGAGACGTAACCGGTGAACTGAAGCCGCGATGAGACGGCCCCGAAGTCAAGCA	1828
QY	741	GTGGCGCCCTGAACCGAGAGAGATGTAAGCCCTGACCGCCCATCTTGCAGAGAGATGAGAA	800
Db	1829	ATGGGCATTTGACAGAGAGAAAGATCAAGCATGTGTGAGATTTGCAACAGAGATGAGAA	1888
QY	801	GAAGGCAAGATCAACAAGATCGGCGCCGAGAACCCCTACAAACACCCCGATTCGCAT	860
Db	1889	GGAGGGGAAATCTCCAGATTTGGGCTGTGAAGCCGTAACCCGTAACACCGCGATTTGCAT	1948
QY	861	CAAGAGAGAGACAGACACCAATGGCGGACGTGGTGGACTTCCGCGACTGAACAAAGC	920
Db	1949	CAAGAGAGAGACTCGACGAAATGGCGCAACTGTGTGACTTCCGCGAGTGAACAAGCG	2008
QY	921	CACCCAGGACTTTGGGGAGTGCAGCTGGGATCCCCACCCCGCCGCTGAAGAGAA	980
Db	2009	CACGCAAGACTTTGGGGAGTTCAGCTGGGATCCCCGACCCCGAGGGCTGAAGAGAA	2068
QY	981	GAAGAGCGTGAACGTGTGAGACGTGGGCGAGCGCTCACTTCAAGCGTGCCTCTGACGAGAA	1040
Db	2069	GAATCCGTGACCGTACTGATGTGGGTGATGCTTCTCCGTTCCTGTGACGAGAA	2128
QY	1041	CTTCCGCAAGTACACCGCTTTCACATCTCCGACGATCAACAAGAGACCCCGGCATTCG	1100
Db	2129	CTTCAAGAGTACACTGTCTTCAACATCCTTCGATCAACAAGAGACCCGGGATTCG	2188
QY	1101	CTACCAATACACGTGTGCCCCGAGGGGTGGAAAGGCGACCCGAGCATCTTCCAGAGAG	1160
Db	2189	ATATCAATACACGTGTGCCCCGAGGGGTGGAAAGGCTCTCCCGCATCTTCCAGAGAG	2248
QY	1161	CATGACCAAGATCTGTGAGCCCTTCCGCGCCGCAACCCCGAGATCGTATCTTACCA---	1217
Db	2249	CATGACCAAAATCTGTGAGCCCTTCCGCAACAGAACCCCGCAATCGTCACTTATCACTA	2308
QY	1218	---GGCCCCCGTAAACGTGGGAGGAGCATGAGAGTGGGCGACGACCGCGCAAGATCGA	1274
Db	2309	CATGATACCTTGTACGTGGGCTGTGATCTTGAAGTAAAGTAAAGGCGACCGCATTAAGATCGA	2368
QY	1275	GGAGTGTGCAAGCACTGTGTGCGCTGGGGCTTGACCAACCCCGACAAAGAGCAACGAA	1334
Db	2369	GGAGTGTGCGACGACCTGTGAGGGTGGGACTGTGACCAACCCGACAAAGAGCAACGAA	2428
QY	1335	GGAGCGCCCTCTCCGTGGAGTGGGTACAGACTGACCCCGCAAGTGTGACCTGTGAGCC	1394
Db	2429	GGAGCTCTCTCTCTGTGAGTGGGTACAGACTGACCTCTGACAAATGTGACCTGTGAGCC	2488
QY	1395	CATGAGCTGTCCGAGAGAGAGAGCTGTGACCGTGAACGACATCTCCAGAGCTGTGGGCA	1454
Db	2489	TATCGTGTCTCCAGAGAGAGAGAGCTGTGACCTGTGAACGACATTAAGAGCTGTGGGAA	2548
QY	1455	GCTGAACGTGGGCGACCGAGATCTTACCCCGCATCAAGTGTGGCAAGCTGTGCAAGCTGCT	1514

Db	2549	GTGAACTGGGCGACGTAGATTATCCAGGGATTAAAGTAGGACGTGTCCAACTTCCT	2608
QY	1515	GGCGGCGGCCAAGGCCCTGACCGACATCGTGTCCCTGACCGAGAGGCCGAGCTGAGACT	1574
Db	2609	CCGCGGAACCAAGGCACTCAACAGAGTGATCCCCCTTAACGAGAGGCCGAGCTCGAACT	2668
QY	1515	GGCCGAAACCGCGAGATCTGCGCGAGCCCTGTGCACGGCGTGTACTACGACCCCAAGCA	1634
Db	2669	GGCAGAAAACCGAAGATCTTAAAGAGGCCCTGTGCACGGCGTGTACTATGACCCCTCCAA	2728
QY	1635	GGACTCTGTGGCCGAGATCCAGAAAGCAGGGGCGACGACAGTGGACCTACAGATCTACCA	1694
Db	2729	GGACTCTGTATCGCCGAGATCCAGAAAGCAGGGGCGACGAGTGGACCTACAGATTTACCA	2788
QY	1695	GGAGCCCTTCAGAAACCTGAAGAACGGCAAGTACGCGCAAGATGTGCGACCCGCCACACCA	1758
Db	2789	GGAGCCCTTCAGAAACCTGAAGAACGGCGAGTACGCGCGATGAGGGGTGCCACACTCA	2848
QY	1755	CGAGCTGAAGCACTGTAACCGAGGCGGTGCAGAGATCGCCATGGAGAGCATGTGATCTG	1814
Db	2849	CGAGCTGAAGCACTGTACCGAGGCGGTGCAGAGATCAACCAAGAACATGTGATCTG	2908
QY	1815	GGGCAAGACCCCGCAAGTTCCGCGCGCCCATCCAAAGAGACCTGGGAGACCTGTGCAC	1874
Db	2909	GGGAAAGATCTCTAAGTTCAAAGCTGCCCATCAAGAGAAACCTGGGAAACCTGTGTGAC	2968
QY	1875	CGACTACTGGCAGGCGCACTGGATCCCGGAGTGGGAGTTCTGTGAACACCCCGCCCTGGT	1934
Db	2969	AGACTATTGGAGGCGCACTGGATTCCTGAGTGGAGTTCTGTGAACACCCCTCCCTGGT	3028
QY	1935	GAACTGTGTGATCCAGCTGGAAGAAAGAACCCCATCATGGCGCGCGACCTTCTACGTGA	1994
Db	3029	GAACTGTGTGATCCAGCTGGAAGAAAGAACCCCATGTGGCGCGGAAACCTTCTACGTGA	3088
QY	1995	CGGCGCGCGCAACCGCGAGACCAAGATCCGCGAABGCGGCTACGTGACCGACCGGGCGG	2054
Db	3089	TGGGCGCGCTACCGGAGACTAAGCTGTGGGCAAGCGGATACCTCACTAACCGGGCGAG	3148
QY	2055	GCAAAATATCGTAGCTGACCCGACCGAACCAACCAAGACCCGAGCTGCAAGGCGATCCA	2114
Db	3149	ACAAAGGTTGTACCTCTCACTGACACCAACCAAGAAAGCTGAGCTGCAGGCCATTTA	3208
QY	2115	GCTGGCCCTTGAGAGACGCGGCAAGGAGTGAACATGTGACCGACACCGCATAGCGCCT	2174
Db	3209	CGTGGCTTTGGAGAGACTCGGGCGTGGAGGTGAACATGTGACAGACTCTCAGTAGTGCCT	3268
QY	2175	GGGATATATCCAGGCCCAAGCCCAACAAAGCGAGAGCGAGCTGTGAACCAATCATCGA	2234
Db	3269	GGGATATATCAAGCCCAAGCGACCAAGATGTGATCGAGCTGTCAATCATGATCATCGA	3328
QY	2235	GCAAGCTATCAAGAGAGAGGTGATCTGAGCTGGGTGCCCGCCACCAAGGGCATCGG	2294
Db	3329	GCAAGCTATCAAGAGAGAGGTCTTATCTGGCGTGGGTACCGGCCCAAAAGGCATTGG	3388
QY	2295	CGGCAACGAGCAATCGACAGCTGTGTGACAAAGGGCATCCGCAAGGTGTGTTCTTGA	2354
Db	3389	CGGCAATGACAGGTGCACAAGCTGTGTCTGGCTGGCATCAGGAAGGTGTATTCCTGGA	3448
QY	2355	CGGCAATCGA 2363	
Db	3449	TGGCATCGA 3457	

RESULT 2  
US-09-552-950-5  
Sequence 5, Application US/09552950  
Patent No. 6541248  
GENERAL INFORMATION:  
APPLICANT: Oxford Biomedica (UK) Limited  
TITLE OF INVENTION: Anti-Viral Vectors  
FILE REFERENCE: 674524/2004  
CURRENT APPLICATION NUMBER: US/09/552,950  
CURRENT FILING DATE: 2000-04-20

; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 5  
; LENGTH: 9772

; TYPE: DNA  
; ORGANISM: Artificial Sequence

; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:psvNFP

US-09-552-950-5

Query Match 66.0%; Score 1624.6; DB 4; Length 9772;

Best Local Similarity 81.8%; Pred. No. 4.3e-258;

Matches 1922; Conservative 0; Mismatches 408; Indels 19; Gaps 4;

QY	33	GGCCACAGGGCAACATCTGTATGAGCGCAGCACTTCAAGGGCCCCAAGCGATCAT	92
DB	2217	GACCAATCGGTACCATCATGATGAGCGCGCAACTTTCGGAAACAAACGCAAGATCGT	2276
QY	93	CAAGTCTTCAACTGCGGCAAGGAGGCCACATCGCCCGCAACTGCGGCGCCCGCCAA	152
DB	2277	CAAGTCTTCAACTGTGCGAAGAGGGGACACAGCCCGCACTGAGGGCCCTTAGGA	2336
QY	153	GAGGGCTCTGGAAGTGGCGCAAGGAGGCCACACAGATGAAGACTGCAACGAGGCCA	212
DB	2337	AAAGGGCTGTGGAAATGTGAAAGGAAGGACACCAAAATGAAAGATTGTACTGAGAGA	2396
QY	213	GGCCAACTTCTTCGGGAGGACCTGGCTTCCCGCAGGCAAGCGCGAGTTCGCCAG	272
DB	2397	GGCTAA-TTTTTTAGGGAAGATCTGCGCTTCCACAAAGGGAAGGCCAGGGAATTTCTTC	2455
QY	273	CGAGCAGAACCGCGCCAAACAGCCCGCCACAGCGCGAGTCTCAGGTGCGGG-----CGA	326
DB	2456	AGNCGAGACAGAGCCAAACAGCCCGCCACAGAGAGCTTCAGGTTTGGGGAAGACAA	2515
QY	327	CAACCCCGGAGCGAGCGCGGCGCGAGGCCCGAGGCCAGGCA-----CCCTGAATTC	380
DB	2516	CAACTCCCTCTCAGAAAGCAGAGCGCGATAGACAAAGAACTGTATCTTTAGCTTCCTCA	2575
QY	381	GATCACCCTGTGCGAGGCGCCCTGTGTGAGCATCAAGGTGGGCGCGAGATCAAGAGGC	440
DB	2576	GATCACTCTTTGCGAGCGACCCCTCTGTCAATAAAGATAGGGGGCGAGCTCAAGAGGC	2635
QY	441	CTGTCTGGACACCGCGCCACAGACACCGTGTGTGGAGGAGATGAGCTGCGCGGCAAGTG	500
DB	2636	TCTCTTGGACACCGGAGCAGACACACCGTGTGTGGAGGAGATGTGTTGCCAGCGCTG	2695
QY	501	GAGCCCAAGATGATCGGCGCATCGCGCTTTCATCAAGGTGCGCAGTACGACAGAT	560
DB	2696	GAAAGCCGAAGATGATCGGGGAATCGGCGGTTTCATCAAGGTGCGCAGTATGACAGAT	2755
QY	561	CCTGATCGAGATCTGGGCAAGAGGCCATCGGCACCGTCTGATCGGCGCCACCCCGT	620
DB	2756	CCTCATCGAAATCTGGGCGCACAAAGGATATCGGTACCGTCTGTGGGCGCCACACCGT	2815
QY	621	GAAATCATCGGCGCAACATGTGACCCAGCTGGGCTGACCCCTGAATTCCTCCCATCAG	680
DB	2816	CAATCATCTCGAGCAGCACTGTGTGACCGAGATCGGTTGACCGCTGAATTCCTCCCAT	2875
QY	681	CCCCTATCGAGACCGTGTCCGTGAAGTGAAGCCCGGCGATGAGCGGCCCAAGGTGAAGCA	740
DB	2876	CCCTATCGAGCGTATCCGTGAAGTGAAGCCCGGCGATGAGCGGCCCGGAGGTCAAGCA	2935
QY	741	GTGGCCCTTACCGAGAGAGATCAAGGCCCTTGACCGCCATCTGGAGAGATGAGAA	800
DB	2936	ATGGCCATTTACAGAGAGAGAGATCAAGGCACTGGTGGAGATTTGACAGAGATGGA	2995
QY	801	GGAGGCAAGATCACCAAGATCGGCCCGGAGACCCCTTACACACCCCGTGTTCGCCAT	860
DB	2996	GGAGGGAATCTTCCAGATTTGGGCTGAGACCCCGTACACACCGCGGTGTTCGCAAT	3055
QY	861	CAAGAGAAGGACAGACACCAAGTGGCGCAAGCTGGTGAATTCCTCGGAGCTGAACAGCG	920
DB	3056	CAAGAGAAGGACTTCGACGAATGGCGCAAGCTGGTGAATTCCTCGGAGCTGAACAGCG	3115

QY	921	CACCCAGGACTTCTGGGAGTGCAGCTGGGCATCCCCACCCCGCGGCTGAAGAGAA	980
DB	3116	CACGCAAGACTTCTGGGAGTTCAGCTGGGCATCCCGACCCCGGAGGCTGAAGAGAA	3175
QY	981	GAAAGAGCTGACCGTGTCTGGAGCGTGGGGAGACCCCTACTTTCAGCTGCCCTCGGATCG	1040
DB	3176	GAAATCCGTGACCGTGTCTGGAGTGGGTGATGCTTCTCTCGTTCCTCGGATCGAAGA	3235
QY	1041	CTTCCGCAAGTACACCGCTTTCACCATCCCAAGCATCAACACAGAGACCCCGGATCCG	1100
DB	3236	CTTCCGCAAGTACACTGCTTTCACCAATCCCTTCGATCAACACAGAGACCCCGGATTCG	3295
QY	1101	CTACAGTACACAGTGTCTGCCCGGCTGGAAGGCGACCCAGCATCTTCCAGAGCAG	1160
DB	3296	ATATCAGTACACAGTGTCTGCCCGGCTGGAAGGCTCTCCGCAATTTCCAGAGTAG	3355
QY	1161	CATGACCAAGATCTCTGGAGCCCTTCCGGCGCCGCAACCCCGAGATCGTATCTACCA---	1217
DB	3356	CATGACCAAAATCTCTGGAGCCCTTTCGCAAAACAGAAACCCCGACATCGTCTATCAGTA	3415
QY	1218	-----GGCCCCCTGTACGTGGGAGCGAATCTGAGATCGGCGCAGCACCGCGCAGATCGA	1274
DB	3416	CATGATGACTTGTGTAGTGGCTCTGATCTAGAGATAGGGCAGCACCGCACCAAGATCGA	3475
QY	1275	GGAGCTGCGCAAGCACCTGCTGGCTGGGCTTCCACCCCGCAGCAAGAACACACAGAA	1334
DB	3476	GGAGCTGCGCAGCACCTGTTGAGTGGGACTGACCAACCCCGCAGCAAGAACACACAGAA	3535
QY	1335	GGAGCCCCCTTCTGTGTGATGGGTACGAGTGCACCCCGCAGCAAGTGGACCGTGCAGCC	1394
DB	3536	GGAGCTCCCTTCTGTGTGATGGGTACGAGTGCACCCCGCAGCAAGTGGACCGTGCAGCC	3595
QY	1395	CATCGACTGCCGAGAGAGAGCTGACCGTGAACGACATCCAGAGCTGGTGGGCA	1454
DB	3596	TATCTGTCTGCCAGAGAAAGACAGCTGGACTCTCAACGACATACAGAGCTGGTGGGAA	3655
QY	1455	GGTGAATCGGGCAGCAGATCTACCCCGGCTCAAGGTGCGCAGCTGTGCAAGTGTCT	1514
DB	3656	GGTGAATCGGGCAGCTAGATTTACCCAGGATTAAGGTGAGGAGCTGTGCAAACTCTCT	3715
QY	1515	GGCGCGCGCAAGGCGCTGACCGACATCGTGCCTTGCACCGAGGAGCGCGAGTGGAGCT	1574
DB	3716	CGCGGGAACCAAGGCACTCAGAGGTGATCCCTTAAACCGAGGAGCGCGAGTGGAGCT	3775
QY	1575	GGCGGAGAACCGGAGATCTCTCGCGAGCCCGTGCACCGGCTGTACTAGACCCAGCA	1634
DB	3776	GGCAGAAACCGGAGATCTTAAAGGAGCCCGTGCACCGGCTGTACTATGACCCCTCCA	3835
QY	1635	GGACCTGGTGGCGGAGATCCAGAGCAGGCGCACGACAGTGGACCTTACAGATCTACCA	1694
DB	3836	GGACCTGTATCGCGGAGATCCAGAGCAGGCGCAAGCCAGTGGACCTTACAGATTTACCA	3895
QY	1695	GGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCAAGATGCGCACCGCCACACCA	1754
DB	3896	GGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCGCCGATGAGGGGTGCCACACTAA	3955
QY	1755	CGAGCTGAAGAGCTGACCGAGCCCGTGCAGAGATCGCCATGGAAGAGATCGTGTCTG	1814
DB	3956	CGAGCTGAAGAGCTGACCGAGCCCGTGCAGAGATCACCAACCGCAAGAGCATCTGTATCTG	4015
QY	1815	GGCGAGACCCCAAGTTCGCGCTGCCATCCAGAGGAGACTGGGAGCTGGTGGAG	1874
DB	4016	GGGAAGACTCTCTAAGTTCAGCTGCCATCCAGAGGAAACCTGGGAACCTGGTGGAC	4075
QY	1875	GGACTACTGGCGGCGCACCTGATCCCCAGTGGGAGTTCGTGAACACACCCCGCTGGT	1934
DB	4076	AGAGTATTGGCAGGCGCACCTGATTCCTGAGTGGGAGTTCGTCAACACCCCTCCCTGGT	4135
QY	1935	GAGCTGTGGTACCAAGCTGGAGAGAGCCCATCATCGCGCGGAGACTTCTTACGTGGA	1994
DB	4136	GAGCTGTGGTACCAAGCTGGAGAGAGAGCCCATAGTGGGCGCGCAACCTTCTACGTGGA	4195

QY	1995	GGGGCCCGCCAAACCCGAGAACCAAGATCGGCAAGGCCGGCTACCTGACCCGACCGGGGCTCG	2054
Db	4136	TGGGGCCCGTTAACAGGGAGACTTAACCTGGGCAAAACCCGATATCGTCACTTAACCGGGGAG	4255
QY	2055	GCAGAAAGATCGTAGCCCTGTACCGGAGACCAACCAACCAAGAACCGAGCTGCAGGGCCATCCA	2114
Db	4256	ACGAAAGGTTGTCAACCTTCATCTGACACCAACCAAGAAAGATGAGCTGCAGGCCATTTA	4315
QY	2115	GCTGGCCCTGCAGGACAGGGGACAGAGGTGAACATCGTTGACCCGACACCGAGTACGCCCT	2174
Db	4316	CCTCGCTTTGACGGACTCGGGCTGGAGGTGAACTCGTGACAGACTCTCGATATGCCCT	4375
QY	2175	GGGCACTATCCAGGCCCCAGCCCGACAAAGCGAGCGAGCGAGCTGTGAACCGATCATCGA	2234
Db	4376	GGGCACTCATTTCAAGCCCGACCGACCAAGATGAATCCGAGCTGGTCAATCAGATCATCGA	4435
QY	2235	GCACTGATCTAAGAAAGGAGAGGTGTACTTAGCGTGGGTGCCCGCCCAAGGGGCAATGCG	2294
Db	4436	GCACTGATCTAAGAAAGGAAAAAGTTTACTTGGCTTGGGTATCCCGCCCAAAAGGATTTGG	4495
QY	2295	CGGCAACGAGCAGATCGAACACTGGTGTAGCAAGGGCAATCCGCAAGGTGCTTCTTGA	2354
Db	4496	CGGCAATGAGCAGGTTCGAACAAGCTGTCTCGGCTGGCATCAGGAAGGTGCTATTCTTGA	4555
QY	2355	CGGCATCGA 2363	
Db	4556	TGGCATCGA 4564	

### RESULT 3

```

US-09-184-418C-8
; Sequence 8, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 8
; LENGTH: 9010
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M65; 137..1621:"gag"; 1426..4425:"pol";
; OTHER INFORMATION: 4570..4948:"vif"; 4888..5178:"vpr";
; OTHER INFORMATION: 5159..5373-"7734..7824:"tat"; 5298..5373-7734..7981:"rev"
; OTHER INFORMATION: 5387..5647:"vpu"; 5565..8171:"env"; 8173..8793:"nef"
US-09-184-418C-8

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Query Match	Similarity	48.9%	Score 1203.6	DB 4	Length 9010
Best Local	Similarity	70.0%	Pred. No. 4e-189		
Matches 1650	Conservative	0	Mismatches 699	Indels 7	Gaps 2
QY	14	TGCGCAGAGCCATGAGCCAGGCCACGACGCGCAACATCTGATGACGCGACGACACTTCA	73		
Db	1221	TGCGTGAAGCATGAGCCAAACAATAGTGTAAACATACGATGATCCAGAAAGCATTTTA	1280		
QY	74	AGGCCCCCAGAGCGATCATCAAGTCTTCAACTGCGGCAAGAGAGGCCCATGCGCCGCA	133		
Db	1281	AAGGAAATTAAGAGATGTTAAAGTTTAACTGTGTAAAGAGAGGCACATGAGCCGAA	1340		
QY	134	ACTGCGCGCGCCCCCGCAGAGAGGGCTGTGGAAGTCCGCAAGAGAGGCCACAGATGA	193		
Db	1341	ATTGCAAGGGCCCCTAGAAGAAAAGGGCTGTGGAATATGTGAAGAGAGGACACCAATGA	1400		
QY	194	AGAGCTGACCGAGAGGCCAGGCCCACTTTCTCCGCGAGAACCTTGCTTCCCCAGGCA	253		
Db	1401	AAGACTGTATCTGAAGAGCGAGCTTA-TTTTTTAGAGAAAATTTGGCCTTCCACAGAGGA	1459		

QY	254	AGGCGCCGGAGTTTCCCGACGACGAGAACCGCGCTCAACAGCTCCACACCGCGAGCTGC	313
Db	1460	AGGCGAGGGAATTTCTTCGAGAACGGCCGACAGCTCAACAGCCCCACGACAGAGAGCTTC	151
QY	314	AGGTGCGGCGACACACCCCGCAGCGACGAGCGCGCGCGAGCGGACCGCGACCTCGAATC	373
Db	1520	AGTTTCGAGGAGACACACCCCGCTCCGAGCAGGAGTGGAAAGACGAGGAGCCCTTAATCT	157
QY	374	TCCCCCAATCACTCTGTGGCAAGCGCCCTGTGTAGACATCAAGGTGGCGCGCAATCA	433
Db	1580	TCCCTCAATCACTCTTTGGACGACACCCCTGTCTCATATAAAGGTAGGGGSCCAATTA	163
QY	434	AGGAGGCCCTGTGGACACCGCGCGCGAGACACCGTGTCTGGAGAGATGAGCTCGCCG	493
Db	1640	AGGAGGCTCTCTTAACACCGGAGCAGGTGATCAAGATTGGAATAAATAAATTTGGCCAG	169
QY	494	GCAAGTGAAAGCCCAAGATGATCGCGGCAATCGCGCTTCATCAAGGTGCGCCAGTACG	553
Db	1700	GCAATTGAAACCAAAAATGATAGAGAGAAATTGAGAGCTTATCGAAGTAAAGACAATAG	175
QY	554	ACCAATGCTATGAGATCTGCGGCAAGAAAGCCATGGGCAAGCTGTGATCGGCCCA	613
Db	1760	ATCAATATCTATGAGAAATTTGTGAAAAAAGCTATGTGTCAGATTAATAGTAGACCTTA	181
QY	614	CCCCCGTAACATCATCGCGCGCAACATGTGACACCACTGGGCTGCACCCCTGAATCTCC	673
Db	1820	CACCTGTCACTATATTGGAAGAAATATGTTGATCAGCTCAGCTTGATGCACTAATAATTTTC	187
QY	674	CCATAGAGCCCATGAGACCGCTGCCCTGGAAGCTGAAGCCCGGACATGAGCGGCCCAAG	733
Db	1880	CAATTATGCTATTTGMAACTGTATCCAGTAAATAATTAAGCCAGAGATGATGGCCCAAGG	193
QY	734	TGAAGCATGTGCCCCCTGACCGAGGAGAAAGATCAAGGCCCTGACCGCCATCTGCGAGAGA	793
Db	1940	TTAAACATGGCCCATGTGCAGAAAGAAATATAAAGCTTTTAACAGCAATTTGTGAAGAA	199
QY	794	TGGAGAGGAGGCGCAAGTCAACCAAGATCGGCGCCGAGAACCCCTTACAACACCCCGTGT	853
Db	2000	TGGAGAAAGAGAAAAATTTACAAAATTTGGGCTGAAAATTCATATAACCTCCAGTAT	205
QY	854	TGCGCATTAAGAAAGAGACAGACACCAAGTGGCGGCAAGCTGTGTGACTTCGCGAGCTGA	913
Db	2060	TTGCCATTAAGAAAGAGACAGCTCTAAGTGGCCAAAATTAGTGAATTTACGAGGAATCA	211
QY	914	AACAAGCAGCCAGGACTCTTGGAGAGGTGACAGCTGGGATATCCCAACCCCGCGGACTGA	973
Db	2120	ATTAAGAACTCAGACACTTTTGGGAGGTTCATTAGAAATACACACCCAGCAGGGTTTA	217
QY	974	AGAAAGAAAGAGGTGACCGTGTGACGTGGGCGACGCTTACTTCAGGCTGCCCTGG	1033
Db	2180	AAAAAGAAAAATCAAGTGCAGTACTGTGATGTGGGGGATGTCAATTTTTCACTTCCTTAG	223
QY	1034	ACGAGGACTTCCGCAAGTACACCCGCTTCAACATCCCGAGATCAACAAGAGACCCCG	1093
Db	2240	ATGAAAGTTTGAAGAAATATATCTGATTCACCAATCTATGACAAACATGAAACACAG	229
QY	1094	GCAATCGCTACAGTACACGTGTCTGCCCAAGGCTGGAGAGGAGACCCCAAGACTCTTCC	1153
Db	2300	GGATTAGATTAATTAATTAATGTCTTCCACAGGATGGAAGAGATCAACAGCAATATTC	235
QY	1154	AGACAGAGTACCAAGATCTCTGAGAGCTTCCGCGCCCGGACACCCCGAGATCTGATCT	1213
Db	2360	AGAGTTAGCATACAAAATCTTAAAGCCCTTCAAGGACCAAAAATTCAGACACTAGTCACT	2413
QY	1214	ACCA-----GGCCCCCTTACGTGGGACAGGCACTGAGATGGGCGACGACCGCGCA	1267
Db	2420	ATCAATATATGATGACTGTGATGATGATCTGAATTAAGAAATAGGGGACATATAGAGCA	2475
QY	1268	AGATCGAGAGCTGCGACAGCACTGTGCGCTGGGCTTACCACCCCGACAAAGAC	1327
Db	2480	AAATAGAAAGATTAAAGAACATCTTATTAAGTGGGATTTTACCAACACAGCAAGAAAC	2539



Qy	1328	ACAGAAGGAGCCCCCTTCTCTGTGGATGGGCTACGAGCTGCACCCCGACAAGTGGACCG	1387
Db	2540	ATCAGAAGAAGACCCCCCATTTCTTTGGATGGGGTATGAACCTCATCTCTGCACAAATGGACAG	2599
Qy	1388	TGCAGCCCATCTAGCTCCCGAGAGAGAGAGCTGGACCGTGAACGACATCCAGAAGCTGG	1447
Db	2600	TACAGCCTATACAGCTGGCAGAAAAGATAGCTGGAATGTTAAATGATATACAGAAGTTAG	2659
Qy	1448	TGGCAAGCTGAACTGGGCCAGCCAGATCTACCCCGCATCAAGGTGCGCCAGCTGTGCA	1507
Db	2660	TGGGAAATTTAAACTGGGCAAGTCAGATTTACGCAAGGATTTAAAGTAAGGCAACTTTGTA	2719
Qy	1508	AGCTGCTGCGGGCGGCAAGCCCTGACGACATCTGTGCCCTGACCGAGGAGGCGGAGC	1567
Db	2720	AATCTCTTAGGGGAGCCAAAGCACTAACAGACATAGTACCACTAACTTGAAGAAGCAGAAT	2779
Qy	1568	TGGAGCTGGCGGAGAACCGGCGAGATCCTGCGCGAGCCGTCGACGGCGTGTACTACGACC	1627
Db	2780	TAGAAITGGCAGAGAACAGGAAATTTTAAAGAACCAAGTACATGGGGTATATTATGACC	2839
Qy	1628	CCAGCAAGGACCTGTGTGGCGAGATTCAGAAAGACGAGGCCACGACCACTGTGACCTTACAGA	1687
Db	2840	CATCAAAGACTTTGATAGCTGAATAACAGAAACAAAGGCCATGACCAATGGACATATCAA	2899
Qy	1688	TCTTACCAGGAGCCCTTCAAGAACTGTGAAGACCGGCAAGTAGTGCACAAGATGCGCACCGCCC	1747
Db	2900	TTTACCAGGAACCAATTCAAAATCTGAAAACAGGGAAGTATGCAAAATAGGAGCAGCCC	2959
Qy	1748	ACACCAACGAGTGAACAGCTGACCGAGGCGGTGCAGAAAGATCGCATGGAGAGCATCG	1807
Db	2960	ACACTAATGATGTAAAAACAGTTAACAGAGGCAGTGCAAAAATAGCCCTGGAGAGCATAG	3019
Qy	1808	TGATCTGGGCAGAGCCGCCAAGTTCCGCTGCCCATCCAGAGGAGACCTGGGAGACCT	1867
Db	3020	TAATATGGGAAAGATTCCTAAATTTAGACTACCCATCCAAAAGAAACATATGGGAAACAT	3079
Qy	1868	GGTGGACCGACTACTGCGAGCCCACTTGGATCCCGGAGTGGGAGTTCGTGAACACCCCCC	1927
Db	3080	GGTGGACAGACTATTGGCAAGCCACTGGATTCTCTGAGTGGGAGTTTGTAAATACCCCTC	3139
Qy	1928	CCCTGGTGAAGCTGTGTATACAGCTGGAGAAAGAGGCCATCATCGGCGCGAGACCTTCT	1987
Db	3140	TCTTAGTAAAAATTATGGTACAGCTGGAGAAAGAACCCCATAGTAGGAGCAGAAACCTTCT	3199
Qy	1988	ACGTGGACGGCGCGCAACCGCGAGACCAGATTCGCAAGGCGGCTACGTGACCGGACC	2047
Db	3200	ATGTAGATGGAGCAGCCAAATAGGAAACTAAATTAGGAAAAGCAGGSTATATTACTGACA	3259
Qy	2048	GGGGCCGGCAGAGATCGTAGCCTGACCGAGACCAACACCGAAGACCGAGCTGCAGG	2107
Db	3260	GAGGAAGGCAAAAATTTGTTACTCTAACTGAAAACAACAAATTCAGAACTGAATTACAAG	3319
Qy	2108	CCATCCAGCTGGCCCTCAGGACAGCGGACGAGGTTGAATCGTCGTGACCGACAGCCAGT	2167
Db	3320	CAATTTACCTAGCTTTCAGAGATTCAGATCAGAAGTAAACATAGTAACTGACTCAAGT	3379
Qy	2168	ACGCCCTGGGCATCATCCAGSCCCAGCCCGACAAGCGAGCGAGCTGGTGAACCCAGA	2227
Db	3380	ATGCGTTAGGAATCATTTCAAGCACATCCAGATAAGTGAATCAGAGTTAGTCAACCCAA	3439
Qy	2228	TCATCGACGAGCTGATCAGHAGGAGAGGTTGTAACCTGAGCTGGGTGCCCGCCCAAGG	2287
Db	3440	TAATAGAACCAATTAATAAGAAAGAAAGGGTCTACCTGTGATGGGTACCCAGCACATAAAG	3499
Qy	2288	GCATCGGCGGCAACGACAGATCCACAAGCTGGTGAAGGGGCATCCGCAAGGTGCTGT	2347
Db	3500	GAATTTGAGGTAAAGACAGGTAGTAAATTAGTTAAGCAAGGGAATCAGGAAGTGTGT	3559
Qy	2348	TCCTGGACGGCATCGA	2363
Db	3560	TTCTAGATGGAATAGA	3575

RESULT 4

US-09-184-418C-9

; Sequence 9, Application US/09184418C

; Patent No. 6492110

; GENERAL INFORMATION:

; APPLICANT: Hahn, Beatrice

; APPLICANT: Gao, Feng

; APPLICANT: Shaw, George

; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN

; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1

; FILE REFERENCE: D6287

; CURRENT APPLICATION NUMBER: US/09/184,418C

; CURRENT FILING DATE: 1999-11-02

; NUMBER OF SEQ ID NOS: 112

; SEQ ID NO 9

; LENGTH: 8972

; TYPE: DNA

; ORGANISM: Human immunodeficiency virus type 1

; FEATURE:

; OTHER INFORMATION: isolate=96ZW51.3; 137.1632:gag; 1419.4435:pol;

; OTHER INFORMATION: 4380.4958:vif; 4898.5188:vpr; 5163.7814:tat;

; OTHER INFORMATION: 5308.7938:rev; 5407.5667:vpu; 5585.8128:env;

; OTHER INFORMATION: 8130.8753:nef

US-09-184-418C-9

Query Match 47.6%; Score 1172.6; DB 4; Length 8972;

Best local Similarity 69.7%; Pred. No. 4.8e-184;

Matches 1655; Conservative 0; Mismatches 694; Indels 26; Gaps 4;

QY 14 TGCCCGAGGCCATGAGCCAGGCCACAGCCGCAACATCTGTGATCGAGCGAGCACTTCA 73

DB 1214 TGGCTGAAGCAATGAGCCAGGTAACAATAACAACATAATGATGCAAGAAAGCAATTTA 1273

QY 74 AGGGCCCCAGCGCATCATCAAGTGTCTCAACTGCGGCAAGGAGGCCACATCGCCGCA 133

DB 1274 AAGGCCCTAAAGAAATGTTTAAATGTTTCAACTGTGCGAGGAAGGCATATAGCCAGGA 1333

QY 134 ACTGCGCGCCCCCGCAAGAAGGCTGCTGGAAGTGGCGCAAGGAGGGCCACCATGA 193

DB 1334 ATTGCAAGGCTCTCGGAAAAAAGGCTGTGGAAATGTGGAAAGGAGGACCAAAATGA 1393

QY 194 AGGACTGCACCGAGCGCCAGGCCAACTTCTTCGCGAGGACCTGGGCTTCCCCCAGGGCA 253

DB 1394 AGACTGTACTAGAGACAGGCTTAA-TTTTTTHAGGAAATTTGGCTTCCCAGAGGGG 1452

QY 254 AGGCCCCGCGAGTTTCCCCAGCGAGCAG-----AACCGCGCCAAACAGCC 295

DB 1453 AGGCCGGGAACTTCCTTTCAGAAACAGACAGCCCAACAGCCCCACAGCTCCAAACAGCC 1512

QY 296 CCACCGAGCGAGCTGCAGGTGCGGGGACAAACCCCGCAGCGAGGGCGGGCGGAGC 395

DB 1513 CCACCGAGCAGAGCTTCAGTTTCAGGAGAGCAACCCCTGCCCCAGGCGAGGAGCAGAA 1572

QY 356 GCCAGGCGACCCCTGAACTTCCCCCAGATCACCTGTGGCAGCGCCCTCGTGAGCATCA 415

DB 1573 GACAGGAACCCCTTAATGCTCAATCACTCTTTGGCAGCGACCCCTTGCTCAATAA 1632

QY 416 AGTGGCGGCGCAGATCAAGAGGCCCCCTGCTGACACCGCGCGCAGACACCGTGCCTGG 475

DB 1633 AAGTAGGGGTCAGATAAAGAGGCTCTCTTGGATACAGGAGCAGATGATACAGTATTAG 1692

QY 476 AGGAGATGAGCTTCCCGCGCACTGGAAGCCCAAGATGATCGCGCATCGCGGCTTCA 535

DB 1693 AAGAAATAATTGCCAGGAATAATGAACCAAAATGATAGAGGAATTGGAGGTTTAA 1752

QY 536 TCAAGTGGCGCCAGTAGCAGCACCATCTTGATCGAGATCTCGGCAAGAGGCCATCGGCA 595

DB 1753 TCAAGTAGACAGTATGATCAATACTTATAGAAATTTTGGAAAAAAGGCTATAGGTA 1812

QY 596 CCGTGTGTATCGGCCCCACCCCGTGAAACATATCGGCGCGCAACATGCTGACCCAGCTGG 655

DB 1813 CAGTATTAGTAGACCTACACCTGTCAACATTAATTGGGAGAAATATGTTGACCCAGCTTG 1872

D	b	2552	CAAAAATGAGAGACCTGCCCAACCTAATATATGTAATAAAACAGTTAAACAGAGCGGTGCAAAAA	3011
Q	y	1790	TCGCCATGAGAGCATCGTATCTGGGGCAAGACCCCAAGTTCCGCTGCCCATCCAGA	1849
D	b	3012	TAGCATGGAAGACATAGTAATATGGGAAAGATTCTTAATTTAGGCTACCATTCMAA	3071
Q	y	1850	AGGAGACTTGAGAGACCTGGTGGACCGACATCTGGAGGCGACACTGATCCCGAGTGGG	1909
D	b	3072	AAGAACATGGGAGACATGTGTGACACACTATTGGACGACCACTGGAATTCCTAGTGGG	3132
Q	y	1910	AGTTCTGAAACACCCCCCCTGGTGAAGCTGTGTGATCCACAGCTGGAGAGAGCCCATCA	1969
D	b	3132	AGTTGTTAATACTCCCCCCTGTGTAATAATTATGTGTCCAGCTGGAGAAAGAACCCATAG	3192
Q	y	1970	TCGGCGCCGAGACCTTCTACGTGAGACGGCCCGCCACCGCGAGACCAAGTCGGCAAG	2029
D	b	3192	CAGAGCAGAACTTATATATGTATGATGAGACAGCAATWAGGAAACTTAATAGAAAAG	3251
Q	y	2030	CCGGCTACGTGAACCGACCGGGGCGCGCAGAAAGATCTGTACCTGTGACCGAGCCACCAAC	2089
D	b	3252	CAGGGTATGTACTGTGACAGAGGAAGCAAAAAATTTGTTACTTAATGAAACAACAAATC	3311
Q	y	2090	AGAAGACCGAGCTGCAGGGCCATCAAGCTGGCCCTGCAGCGAACGGGACGAGAGGTGAACA	2149
D	b	3312	AAAAAGCTGAATTAACAAGCAATTCAGTTAGCTTTGACGGATTGAGATCTCAAGAAATAACA	3371
Q	y	2150	TCGTGACCGACACCGACGTACGCCCTGGGCATCATCCAGGCCACGCCGACAGAGCCAGA	2209
D	b	3372	TAGTAAACAGACTCAAGTATGCAATWAGGATCATCCAAACACAACAGATDAAGGTGAT	3431
Q	y	2210	GGCGAGCTGGAGACCGATCATGTGAGAGAGCTGATCAAGAGAGGAAGTGTACTGTAGCT	2269
D	b	3432	CAGAAATTAGTCAATCAATATATAGAACAGTTGATAAAAAAGGAAAGGGTTTACTGTGCAT	3491
Q	y	2270	GGGTGCCCGCCCAAAAGGACATCGCGGCGCAACGACGATCGACAACTGGTGAAGCAAG	2329
D	b	3492	GGGTACAGACACAAAGGAATTTGGAGAAATGAAACAAGTAGTAATTTGTAAGTGTG	3551
Q	y	2330	GCATCCGCAAGGTCGTTCTCTGAGACGGCATCAT	2364
D	b	3552	GAATCAGGAAAGTGCCTTTCTTGATGGAAATAGAT	3586

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RESULT 5
US-09-184-418C-11
; Sequence 11, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 11
; LENGTH: 8959
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; 138.1613."gag";
; OTHER INFORMATION: 1418-4428: "pol"; 4364-4939: "vif"; 4879-5169: "vpr";
; OTHER INFORMATION: 5150-7782: "tat"; 5289-7939: "rev"; 5378-5658: "vpu";
; OTHER INFORMATION: 5556-8129: "env"; 8131-8754: "nef
US-09-184-418C-11

Query Match          47.3%;   Score 1165.4;   DB 4;   Length 8959;
Best Local Similarity 69.6%;   Pred. No. 7.3e-183;
Matches 1640;   Conservative 0;   Mismatches 706;   Indels 11;   Gaps 4;

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14 TGGCCGAGGCCATGAGCAGGCCACCAGCGCCCAACATCTCTGATCGAGCGCAGCAACTTCA 73  
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74 AGGGCCCAAGCCCATCATCAAGTGTCTTAACTGGCGCAAGAGGAGGCCACATCGCCGCA 133  
1273 AAGGCCCTAAAGAAATGTTTAAATGCTTCAACTGTGGCAAGGAGGCCACATAGCCAGAA 1332  
134 ACTGCGCGCCGCCCGCAAGAGGGCTGCTGGAGTTCGCGCAAGGAGGGGCCACCATGTA 193  
1333 ATTGCAAGGCCCTTAGAAAAGAGGCTGTTGGAAATGTGGCAAGAGGACACCAATGA 1392  
194 AGGACTGCAACCGAGCGCCAGGCCCAACTTCTTCGCGAGGAGCACTGGCTTCCCCCAGGGCA 253  
1393 AAGACTGTACTGAGAGGCGAGCTAA-TTTTTTAGGGAATTTGGCTTCCCAAGGGG 1451  
254 AGGCCGCGAGTTCCCGAGCGAGCAGNAACGCGCGCAACAGCCCAACAGCGCGGAGCTGC 313  
1452 AGGCCAGGGGAATTTCTTCAAAAACAGGCCAGAGCCCAACAGCCCCACAGCAGAGAGCTTC 1511  
314 AGGTGCGCGCGCAACACCCCGCAGCGAGGCGCGCGCCGAGCGCCAGGGCACCTCGAAT 373  
1512 AGSTTCAAGGAGCAACCCCGCTCCGAGCAGAGTCTGAAAGACAGGGAACCCCTTAACT 1571  
374 TCCCCAGATCACTCTGTGSCAGCGCCCTCTGTGTGAGCATCAAGTGGCGGCGCAGATCA 433  
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434 AGGAGCCCTGCTGGAACACCGGCGCGCAACGACCGTGTGAGGAGATGAGCCTGCCCG 493  
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494 GCAAGTGAAGCCCAAGATGATCGCGGGCATCGCGGCTTTCATCAAGGTGCGCCAGTACG 553  
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554 ACCAGATCTGTGATCGAGATCTGGCGCAAGAGCCATCGGCACCGTGTGATCGGCCCA 613  
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1812 CACCTGTCAACATAATTGGAAGAGATATGTTGACTCAGCTTGGATGCATCTCTAAATTTTC 1871  
674 CCATCAGCCCATCGAGACGCTCCGCTGAAGCTGAAGCCCGCATGGAAGCGGCCCAAGG 733  
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1932 TTAACAGTGGCCATTGACAGAGAGAGAAATAAAGCATTAACAGAAATTTGTAAAGAAA 1991  
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1034 ACAGGACTTCCCAAGTACCGGCTTCCACCATCCCGAGCATCAACAGAGACCCCG 1093  
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2712 AACTCTTTAGGGGGGCCAAAGCACATAACAGACATAGTACCACTAATGAAAGACAGAAAT 2771  
1568 TGGAGTGGCCGAGAACCGCGAGATCTCGCGAGCCGCTGACGCGCTGTACTACGACC 1627  
2772 TAGAATTAGAGAGAACAGGGAATTTCTAAAGAGCCAGTATGAGATATTATTGACC 2831  
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1808 TGATCTGGGGCAAGACCCCAAGTTCCGCTTCCCATCCAGAAAGGAGACTTGGGAGACCT 1867  
3012 TAAATAT-GGGAAGACCCCTAAATTTAGACTACCCATCCAAAAGAAACGTGGAGACAT 3070  
1868 GGTGACCGCACTACTTGGCAGGCGCACTGGATCCCGAGTGGGAGTTCGTAACACCCCGC 1927  
3071 GGTGACAGACTATTGGCAGGCGCACTGGATTCCTGATTGGGAGTTTGTAAATACCCCTC 3130  
1928 CCTGCTGAAGCTGTGGTACAGCTGGAGAGAGCCCATCATCGCGCCGAGACCTTCT 1987  
3131 CCTAGTAAATTAATGTTACCACTAGAAAAGAACCCCATAGTAGAGCAGAAAATTTTCT 3190  
1988 ACCTGGAAGGCGGCCCAACCGCGAGACCAAGATCGGAAGGCCCGGCTACTGTAACCGGAC 2047  
3191 ATGTAGATGGAGCAGCTAATAGGGAACCTAAAGTAGGAAAACGAGGGTATGTTACTGACA 3250  
2048 GGGGCGCGGAGAGATCTGTGAGCTGACCGAGACCAACCAACAGAAAGCCGAGCTGACGG 2107  
3251 GAGGAAGGCGAAAATTTGTTCTTAACTGAAAACAAACAAATCAGAAGACTGAAATGCAAG 3310  
2108 CCATCCAGCTGCTGCGAGACGCGCAGGAGTGAATCGTGACCGCAGCCAGT 2167  
3311 CAATTCAGTACTTTTGAAGATTCAGGAACAGAAAGTAAACATAGTAACAGACTCACAGT 3370  
2168 AGCCCTCGGCATCATCCAGGCCCGCCGCAAGAGGAGAGCTGGTGGTGAACCCAGA 2227

Db 3371 ATGCAATTAGGATCATCTTCAAGCAACAACAGATAAAGTGATAGATTAGTCAACCAAA 3430  
 QY 2228 TCATGAGACGCTGATCAAGAAGAGTGTACCTGAGCTGGGCGCCCGCCACAAAG 2287  
 Db 3431 TAATGACAAATTAATAACAAAGAAAGAGTCTAATCTGTGATGGTACAGACATPAAAG 3490  
 QY 2288 GCATGCGCGGCAACGACGATCGAACAGCTGTGAGCAAGGGCATCCGCAAGTGTCTGT 2347  
 Db 3491 GAATTGGAGGGAATGAACAAGTAGATAGATTAGTAGTGGAATTGGAAGAAAGTACTGT 3550  
 QY 2348 TCCTGAGCGCATCGAT 2364  
 Db 3551 TTCTAGATGGATAGAT 3567

## RESULT 6

US-09-184-418C-4  
 / Sequence 4, Application US/09184418C  
 / Patent No. 6492110  
 / GENERAL INFORMATION:  
 / APPLICANT: Hahn, Beatrice  
 / APPLICANT: Gao, Peng  
 / APPLICANT: Shaw, George  
 / TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
 / TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1  
 / FILE REFERENCE: D6287  
 / CURRENT APPLICATION NUMBER: US/09/184,418C  
 / CURRENT FILING DATE: 1999-11-02  
 / NUMBER OF SEQ ID NOS: 112  
 / SEQ ID NO 4  
 / LENGTH: 8992  
 / TYPE: DNA  
 / ORGANISM: Human immunodeficiency virus type 1  
 / FEATURE:  
 / OTHER INFORMATION: isolate=92RM09, 139,1624,gsag, 1690,4428,pol (N-terminus uncertain  
 / OTHER INFORMATION: 4573,4951,vlf; 4891,5181,vpr; 5162,7801,tat; 5301,7958,rev;  
 / OTHER INFORMATION: 5403,5648,vpu; 5566,8148,env; 8150,8773,nef  
 / US-09-184-418C-4

Query Match 46.4%; Score 1142; DB 4; Length 8992;  
 Best Local Similarity 68.6%; Pred. No. 4,9e-179;  
 Matches 1620; Conservative 0; Mismatches 730; Indels 10; Gaps 3;

QY 14 TGGCCGAGGCGCATGAGCGCCACAGCGCCACATCTGTATGACGCGACGCACTTCA 73  
 Db 1221 TGGCTGAAGCAATGAGCGCAAGTACAAACCAATATGATGACAGAGGCAATTTTA 1280  
 QY 74 AGGGCCCCAAGCGCATCTATCAAGTCTTCACTGGCGCAAGAGGCCACATCGCCGCA 133  
 Db 1281 AGGGCCAGAGAAATTTAATTAAGTCTTCACTGGCGCAAGAGAGACACCTAGCCAGAA 1340  
 QY 134 ACTGCGCGCGCCCGCGCAAGAGGGCTGCTGGAATGCGCGCAAGAGGGCCACGATGA 193  
 Db 1341 ATTGAGAGGCCCTTGAAGAAAAGGGCTGTGGAATGTGGAAGAGAGGACACCAATGA 1400  
 QY 194 AGGACTGCAACGAGCGCGACGCCAACTTCTTCGCGAGGACCTGTGCTTCCCGAGGCA 253  
 Db 1401 AAGACTGCATGAGAGCAGGCTAA-TTTTATAGGAAAATTTGGCTTCCCAACAGGGG 1459  
 QY 254 AGGGCCGCGAGTTCCTCCAGCGACGAGAACCGGCCAACAGCCCGACCGCGAGCT-- 311  
 Db 1460 AGGGCCAGAGAAATTTTCCCGAGAGCACTGAGGCGCAACAGCCCGACGAGAGAACTTT 1519  
 QY 312 -GCAGTGCAGCGCGACAAACCCCGACGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCA 370  
 Db 1520 GGAATGGGGGGAAGAGATAGCTCTCTCTGAAACAGAGCAGAAAGACAGGGAACCTTTA 1579  
 QY 371 ACTTCCCGCAGATCACTCTGTGCGAGCGCCCTCTGTGTAGGATCAAGGTGGCGCGCGCA 430  
 Db 1580 ATTTCCTCAATCACTCTTTGGCAACGACCCCTTGTCAAGTAAATAATAGAGGTGCGC 1639  
 QY 431 TCAGAGAGCCCTGTGTGACACCGGCGCGCGAGACCGGTGTGTGAGAGATGAGCCCTGC 490

Db 1640 TAAGAGAGCTCTATTAGATACAGAGACAGATGATACGATATAGAAATAAATTTGC 1699  
 QY 491 CCGGCAGTGGAAACCCAAAGTATCGCGGCATCGCGCGCTTATCAAGTGGCCAGT 550  
 Db 1700 CAGAAAATGGAAAACAAAATGATAGGGGAAATTTGAGGTTTATCAAGGTAAACAGT 1759  
 QY 551 ACAGCAAGATCTGATGAGATCTGCGCAAGAGGCGCATCGGACCGGTGTATCGGCC 610  
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 QY 611 CCACCCCGTGAACATCATCGGCCGAACATGCTGAACCGACTGGCTGGCAACCTGAACT 670  
 Db 1820 CTACATCTGTCAATATATTGAGAAATATGTGACCCGAAATGGTTGTACTTAAACT 1879  
 QY 671 TCCCATCAGCCCATGAGACCTGTGCCGTGAAGCTGAACCCCGCATGAGCGGCCCA 730  
 Db 1880 TTCCAAATTAATCTCAATTAGAGCTGTACACAGTAAAGCCAGGAATGATGCGCCAA 1939  
 QY 731 AGGTGAAGCAGTGGCCCTGACCGAGGAAAGATCAAGGCCCTGACCGCATCTGGCAG 790  
 Db 1940 AGGTAAACATGGCCATTGACAGAGAAAAAATTAAGCATTAAGAAATTTGTACAG 1999  
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 Db 2000 AAATGGAAGAAAGAGGGAATAATTTCAAAAATCGGGCTGAAAATCCATATTAACACTCAG 2059  
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 QY 1151 TCCAGAGCAGATACCAAGATCTGTGAGCCTTCCGCGCGCCGCAACCCCGAGTCTGA 1210  
 Db 2360 TCCAAAATATATACAAAATCTTAAAGCCCTTTAGGGCACAAAAACCAAAAATATGTA 2419  
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 Db 2480 CAAAATTAAGAGAGTTAAGAAACATCTTAAGTGGGGATTACACACCAAGACAGA 2359  
 QY 1325 AGCACAGAGAGAGGCCCCCTTCTCTGTGATGGGCTACAGACTGCAACCCCGACAGTGA 1384  
 Db 2540 AACATCAGAAAGAACTCCATTTCTTGTGATGGGGTATGAACCTTCACTCGAACAAATGGA 2599  
 QY 1385 CCGTGCAGCCCATGAGCTGCGCGAGAGAGAGTGAACGCTGTAAGAGACATCCAGAGC 1444  
 Db 2600 CAGTACAACTATATCACTGTCCAGAAAGATAGCTGATCTGCAATGATATACAGAACT 2659  
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 Db 2660 TAGTGGGAAATTAATTAAGTGGGCAAGTCAATTTTAAAGGGTAAAGTAAAGCAATGT 2719  
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 Db 2720 GTAAATCTTTAGGGGAACCAAGCATTAACAGCATATGATCACTTAAGAAAGCAG 2779

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QY 1565 AGCTGAGCTGGCGGAGAACCGGAGATCTCGCGAGCCCGCTGACGGGTGTAACG 1624
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QY 1685 AGATCTACGAGGAGCCCTCAAGAACTGAAGCTGAGACCGGCAAGTACGCAAGATCGCACCG 1744
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QY 1745 CCACACCAACGACGCTGAAGCAGCTCACCGAGCCGTCGAGAAAGATCGCATCGGAGCA 1804
Db 2960 CCACACTAATGACGTAAACAGTTAACAGAGCAGTGCMAAGATAGSCCATGGAAGCA 3019
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QY 1865 CTGTGTGACCGACTACTGCGAGGCCACCTGGATCCCGAGTGGGAGTTCTGTAACACCC 1924
Db 3080 CATGTGGACAGACTATTGGCAAGCCACCTGGATTCTGAGTGGGAGTTGTFTAATACCC 3139
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Db 3140 CTCCTCTAGTAAATTTATGTTACCTAGCTAGAGAAAGAACCCATATTAGGAGCAGACTT 3199
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QY 2345 TGTCTCTGACGCGCATCGAT 2364
Db 3560 TGTCTCTAGATGGAATAGAT 3579
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RESULT 7
US-09-117-217-7
; Sequence 7, Application US/09117217
; Patent No. 6221578
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Kuit
; APPLICANT: PAUWELS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; TITLE OF INVENTION: OF HUMAN HIV STRAINS
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/117,217
; CURRENT FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 15
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; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(492)
; OTHER INFORMATION: gag Polyprotein
US-09-117-217-7

Query Match 44.9%; Score 1106.8; DB 3; Length 2601;
Best Local Similarity 68.3%; Pred. No. 2.6e-173;
Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;

QY 43 GCCACATCTCTGATCAGCGCAGCAACTTCAAGGGCCCCAAGCGCATCATCAAGTGTCTTC 102
Db 109 GCTACATAATGATCAGAGAGGCAATTTTAGAAACCAAGAAAGATTCTTAAGTGTCTTC 168
QY 103 AACTCGGCAAGGAGGCGCACATCCCGCAACTGCGCGCCCCCGCAGAGAGGCTGC 162
Db 169 AATTGTGCAAGAAAGAGGCGACACAGCCAGAAATTGAGGGCCCCCTAGGAAAAGGGCTGT 228
QY 163 TGAAGTGTGGCAAGGAGGCGCCACAGATGAAGAGCTGCACCGAGCGCCAGGCCCAACTTC 222
Db 229 TGAATAATGTGGAAGGAGGACACCAATGAAGATTGTACTGAGAGACAGGCTAA-TTT 287
QY 223 TTCCCGGAGGACCTGGCTTCCCCAGGGCAAGGCGCGGAGTTTCCCGAGCGAGCAAGAC 282
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Db 348 AGAGCCACAGCCCCCAGAGAGAGCTTCAGGTCTGGGGTAGAGACAACAACTCCCCC 407
QY 337 ACAGGCGCGCGCGCGAGCGCCAGGCA-----CCCTGAACCTTCCCCCAGATCAACCTG 390
Db 408 TCAGAGCAGGAGCGGATAGACAAGGAATGTATCTTTAACTTCCCTCAGTCACTCTT 467
QY 391 TGGCAGCGCCCTGTGTGAGCATCAAGGTGGCGGCGAGATCAAGAGGCCCTGTCTGGAC 450
Db 468 TGGCAACGCCCTCTGTCACTAATAAGATAGGGGGGCACTAAAGGAGCTCTATTAGAT 527
QY 451 ACCGCGCGCGACACACCGTGTGGAGAGATAGCTGCCCGGCAAGTGGAGGCCCAAG 510
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QY 511 ATGATCGCGCGCATCGCGGCTTCATCAAGGTGCGCCAGTACGACCATCTGTATCGAG 570
Db 588 ATGATAGGGGAAATTGGAGGTTTTATCAAGTAAAGACAGTATGATCAGATCTCATAGAA 647
QY 571 ATCTCGGCAAGAGGCCATCGGACCGTGTGATCGGCCCCACCCCGTGAACATCATC 630
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QY 691 ACCGTGCCCCGTGAAGCTGAAGCCCGCATGAGCGGCCCAAGGTGAAGCAGTGGCCCCCTG 750
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QY 811 ATCAGAGATCGGCCCGAGAACCCCTACACACCCCGCTGTTCCCATCAAGAGAG 870
Db 888 ATTTCAAAAAATGGGCGCTGAAAAATCCATCAATACTCCAGTATTGTCCATTAAGAAAAA 947
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Db 948 GACAGTCTAAATGAGAAAATTAGTAAATTTCAGAGAACTTAAATAGAACTCAAGAC 1007  
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 Db 1368 CAACATCTGTGAGGTGGGACTTACACACAGCAAAAAACACAGAAAGAACTTCA 1427  
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 QY 1405 CCCGAGAGAGAGCTGACCGGTGAACACATCCAGAAAGCTGTGGGAGAGTGAAGCTG 1464  
 Db 1488 CCAAGAAAAGACGTGACTGTCTATGACATACAGAAAGTATGAGGGAATATGATGG 1547  
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 Db 1548 GCAAGTCAATTTTCCAGGGATTTAAAGTAAGGCAATTAATGAACTCTTAAGAGAAC 1607  
 QY 1525 AAGGCTTGAACCGATCTGTGCTGACCGAGAGGCGAGCTGAGCTGGCCGAGAAC 1584  
 Db 1608 AAGCACTAACAGAGTATATCACTAACAGAAAGAGAGCTGAACTGCGAGAAAC 1667  
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 Db 1668 AGAGAGATTTTAAAAAGAACAGTACTGAGGTGTATGACCCATCAAAAGACTTAATA 1727  
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 Db 1728 GCAGAAAATACAGAAAGAGGCGCAAGCCATGACATATCAATTTATCAAGAGCAATTT 1787  
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 Db 1788 AAAAAATTTGAAAAAGAAAAATGCAAGATGAGGGTGCACACATTAAGATGTAATA 1847  
 QY 1765 CAGTGAACGAGGCGTGCAGAAAGATGCGCAATGAGAGCATCTGATCTGGGCAAGACC 1824  
 Db 1848 CAATTAACAGAGGCGAGTCAAAAAATAACACAGAAAGCATAGTAATHTGGGAAAAAGCT 1907  
 QY 1825 CCCAGTTCGCGCTGCTCATCAAGAAAGAGCTGGGAGACCTGGTGAACGCACTACTG 1884  
 Db 1908 CTTAAATTTAAAGCTCCATCAAAAGAAACATGGGAAACATGTGACAGATTAATGG 1967  
 QY 1885 CAGGCGACCTGGATCCCGAGTGGAGTGTGTAACCCCGCGCTGTGAACCTGTGG 1944  
 Db 1968 CAGGCGACCTGGATCTGAGTGGAGTGTGTAATCCCTCCCTTAAGTAAATTAATGG 2027  
 QY 1945 TACAGCTGAGAGAGAGCCCATCATGCGCGCCAGAGCTTCTTCTGAGCGGCGCC 2004  
 Db 2028 TACAGCTTGAAGAAAGAACCATATGATGAGAGCAGAAACCTTCTATGATGAGGCGAGCT 2087

QY 2005 AACCGGAGACCAAGATCGCAAGCGCGCTACGNGACCCAGCGGCGCGGCAAGATC 2064  
 Db 2088 AACGAGAGACTTAATTTGAAAAAGCAGATATGTATTAATAGAGAAACAAAGATT 2147  
 QY 2065 GTGAGCTTGAACCGAGACCAACCAAGAGACCCAGAGTGCAGGCGCATCAGCTGGCCCTG 2124  
 Db 2148 GTCAACCTTAATGACACAGAAATCAGAGACTGATGTTACAGCAATTTATCTAGCTTGG 2207  
 QY 2125 CAGGACGCGGCAAGAGTGAACATCTGTGACCGACAGCGATACGCCCTGGGCAATC 2184  
 Db 2208 CAGATTCGAGTTAGAAAGTAAACATAGTAAACAGCTCAATATGATTTGAAATCATTT 2267  
 QY 2185 CAGGCGGAGCCCGCAAGAGGAGAGAGAGAGTGTGAAACAGATCATCTGAGAGCTGATC 2244  
 Db 2268 CAGGACACACAGATCAAAAGTAAAGTAAAGTAAATCAATCAATCAATCAATCAATCAAT 2327  
 QY 2245 AAGAGAGAGAGTGTACTGCTGAGTGGGTGCGCCCGCAAGAGGCGATCGGCGCAAGAG 2304  
 Db 2328 AAAAAAGAAAGGTCTATCTGCGCATGGGTACACAGACACAAAGAAATTTGAGAAATGAA 2387  
 QY 2305 CAGATCAACAGCTGTGAGAGAGGAGATCCGCAAGTGTCTTCTGAGCGCATGAT 2364  
 Db 2388 CAGTGAATTAATTAATGTCAGTGTGAGATCAGAAAGTAAATTTTATGATGAGATAGAT 2447

## RESULT 8

US-09-117-217-9  
 ; Sequence 9, Application US/09117217  
 ; Patent No. 6221578  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERROG, Kurt  
 ; APPLICANT: PAUMELS, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/117, 217  
 ; CURRENT FILING DATE: 1998-07-24  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 9  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (334)..(489)  
 ; OTHER INFORMATION: gag.P6 (52 AA)  
 US-09-117-217-9

## Query Match

Best Local Similarity 44.9%; Score 1106.8; DB 3; Length 2601;

Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;

QY 43 GCCAATCTCTGTAGAGCCGACCAACTTCAAGGCGCCCAAGGCGATCAATCAATGCTTC 102  
 Db 109 GCAACATATATGATGAGAGAGCAATTTTAGAACCAAGAAAGATTTTAAAGTGTTC 168  
 QY 103 AACTGGGCGAAGAGGCGCAATCGCCCGCACTGCGCGCCCGCGCAAGAAAGGCTGC 162  
 Db 169 AATTGTGGCAAAAGAGGCGACACAGCCAGAAATTTGACAGGGCCCTTGGAAAAAGGGGTGT 228  
 QY 163 TGAAGTGGCGAAGAGGCGCCACAGATGAAGATCTGACCCGAGCGCCCAACTTC 222  
 Db 229 TGAAGTGGCAAGAGAGGACACCAATGAAAGATTGTACTGAGAGACAGGCTAA-TTT 287  
 QY 223 TTCCGAGAGACCTGAGCTTCCCGCGGCAAGCGCCGAGAGTTCGCCAGAGAGAGAAC 282  
 Db 288 TTTAGAGAGATGTGGCTTCTTCAAGAGGAAAGCCAGGAAATTTCTTTCAGAGCAGACC 347  
 QY 283 CGCGCCAAAGCCCAACAGCCGCGAGCTGAGGTGCGCG-----CGAACACCCCGC 336

Db 348 AGAGCCAAACAGCCCCACCAAGAGAGCTTCAGGTCTGGGTAGACACAACAACTCCCC 407  
QY 337 AGGAGCGCGCGCCAGCGCCAGGGCA-----CCCTGAACTTCCCCAGATCAACCTG 390  
Db 408 TCAGAGCAGAGCCGATAGACAGGAAGTGTATCTTTAACTTCCCTCAGGTCACTCT 467  
QY 391 TGGCAGCGCCCTGTGTAGCATCAAGGTGGCGCCAGATCAAGGAGGCCCTGTCTGGAC 450  
Db 468 TGGCAACGACCCCTCGTCAATAAAGATAGGGGCACTAAAGAACTCTATTAGAT 527  
QY 451 ACCGCGCCGACGACACCTGTCTGGAGGAGATAGCCTGCCCGGCAAGTGGAGCCCAAG 510  
Db 528 ACAGGAGCAGATGATACAGTATTAGAGAAATGAGTTTCCAGGAAGATGGAAACCAAAA 587  
QY 511 ATGATCGGGCGCATCGCGGCTTCATCAAGGTGCGCCAGTACGACAGATCTGTATCGAG 570  
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QY 571 ATCTCGGCAAGAAGCCATCGGCACCGTGTGATCGGCCCCACCCCGTGAACATCATC 630  
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Db 1008 TTCTGGGAAGTCAATTAGGAATACCAATCCCGCAGGCTTAAAAAGAAAAATCAGTA 1067  
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QY 1225 CTGTACGTGGGCGAGCATGGAGATCGGCAGCAACCGCCAGATCGAGAGCTGGC 1284  
Db 1308 TTGTATGTAGATCTGATTTAGAAATAGGAGAGCATAGAAACAAAATAGAGGAGCTGAGA 1367  
QY 1285 AAGCACTGTCTCGGTGGGCTTCAACACCCCGACAGAACGACCAAGAGAGCCCCC 1344  
Db 1368 CAACATCTGTTGAGTGGGACTTACACACAGACAAACAAACATCAGAAAGAACCTCCA 1427  
QY 1345 TTCTGTGGATGGCTAGAGCTGACCCCGACAAAGTGGACCGTGCAGCCCATCGAGCTG 1404

Db 1428 TTCCTTTGGATGGGTATTGAACCTCCATCTGTATAATGACAGTACAGCCTATAGTGCTG 1487  
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Db 1488 CCAGAAAAAGACAGCTGGACTGTCAATGACATACAGAAAGTATAGTGGGAAATGAATGG 1547  
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Db 1548 GCAAGTCAGATTTACCCAGGGATTAAGTAAGCAATATGTAAACTCTCTAGAGAAC 1607  
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QY 1885 CAGCCACTGATCTCCCGAGTGGGAGTTCGTGAACACCCCCCCTCGTGAAGCTGTGG 1944  
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Db 2388 CAAGTAGATAAATTAGTCACTGCTGGAATCAGGAAAGTACTATTTTTAGATGGAATAGAT 2447

## RESULT 9

US-09-117-217-11  
; Sequence 11, Application US/09117217  
; Patent No. 6221578  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre



APPLICANT: HERTOGS, Kurt  
 APPLICANT: PAMWELS, Rudi  
 TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 TITLE OF INVENTION: OF HUMAN HIV STRAINS  
 FILE REFERENCE: 1377-125P  
 CURRENT APPLICATION NUMBER: US/09/117,217  
 CURRENT FILING DATE: 1998-07-24  
 NUMBER OF SEQ ID NOS: 15  
 SOFTWARE: PatentIn Ver. 2.0  
 SEQ ID NO: 11  
 LENGTH: 2601  
 TYPE: DNA  
 ORGANISM: HIV-HXB2  
 FEATURE:  
 NAME/KEY: CDS  
 LOCATION: (453)..(749)  
 OTHER INFORMATION: Protease  
 US-09-117-217-11

Query Match 44.9%; Score 1106.8; DB 3; Length 2601;  
 Best Local Similarity 68.3%; Pred. No. 2.6e-173;  
 Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;

43 GCCAATCTCTGATGAGCGCAGCACTTCAAGGCCCCCAAGGCATCATCAATGCTTC 102  
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 103 AACTGGGCAAGAGGGCCCATCGCCGCACTGCGCGCCCCCGCAAGAGGCTGC 162  
 169 AATGCGCAAAAGAGGCAACAGCAGCAATTTGAGGCCCCCTTAGAAAAAGGCTGT 228  
 163 TGGAAATGCGGCAAGAGGGCCACAGATGAAGACTGCAACGAGCGCCAGGCACTTC 222  
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 283 CCGGCAACAGCGCCACAGCGCGAGCTGCAAGGTGCGGGG-----CGAACACCCCGCG 336  
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 337 ACGAGGCGCGCGCCAGCGCCAGGCA-----CCCTGAATCTTCCCGCATCAACCTG 390  
 408 TCAGAGCAGAGCGCGATGACAGAGAACTGATCTTTAATCTTCCCTCAGGCACTCTT 467  
 391 TGGCAGCGCCCTCTGTGATGATCAAGGTGGCGCGCCAGATCAAGAGCGCTGAC 450  
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 708 GGAAGAAATCTGTGATCAGATGGTTGCACTTTAAATTTTCCCTTAGCCCTTATGAG 767  
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 1188 AATGTGCTCCACAGAGATGGAAGATCACAGCAATTTCCAAAGTAGATGACAAAA 1247  
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 1368 CAACATCTGTGAGGTGGGACTTACACACAGCAAAACATCAGAAACACCTCCA 1427  
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 1428 TTCCTTGGATGGGTAAATCTCATCTGTAATGACAGTACACCTCTATGATGCTG 1487  
 1405 CCGAGAGAGAGGTGAGCCGTGAACATCCAGAGCTGTGGGCAAGTGAAGTGA 1464  
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 1525 AAGGCTGACCGCATGTGCTGCTGACCGAGAGGCGGAGCTGAGACTGGCCAGAAC 1584  
 1608 AAGCATTAACAGAGTATATCACTAACAGAGAGGAGCTAGAACTGGCAAAAAAC 1667  
 1585 CGGAGATCTGCGGAGCCCGTGCAGCGGCTGTACTACGACCCCGAGAGAGAGCTGGTG 1644  
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 1645 GCGGATCTCAGAGCAGGSCCAGACCAAGTGAACCTAACAGATTTACAGAGGCTTTC 1704  
 1728 GAGAAATAACAGAGCAGGCGCAAGGCCAATGGAATATCAATTAATCAAGAGCAATTT 1787  
 1705 AAGAACTGAAGACCGGCAATGAGCCCAAGTGGGCAACCGCCCAACCAAGAGCTGAG 1764  
 1768 AAAAAATCTGAACAGGAAATTAAGCAATTAAGAGGCTGCCACATTAATATATAAA 1847  
 1765 CAGCTGACGAGCGCTGACAGAGATCGCATGAGAGCATGATCTGGGGCAAGACC 1824  
 1848 CAATTAACAGAGGCGAGTGCAGAAATAACCAAGAAAGCAATGATTAATGGGAAAGACT 1907  
 1825 CCAAGTTCCGCTGCGCATCAAGAGAGACTTGGGAGACCTGCTGAGACGACTACTGG 1884

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 Qy 2005 AACCGCAGACCAAGATCGGACGAGCCCGCTACGTGACCGACCGGGCGCGCAGAGATC 2064  
 Db 2088 AACAGGGAGACTAAATTAGGAAAGACGAGATATGTTACTAATAGAGGAAGACAAAAAGTT 2147  
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 Db 2148 GTCACTTAATCTGACACACAAATCAGAAAGTGTGTTACAGCAATTTATCTAGCTTTG 2207  
 Qy 2125 CAGACAGCGCGCAGCGAGGTGAACATCGTGACCGACCGCAGTACGCCCTCGGCATCATC 2184  
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## RESULT 10

US-09-117-217-13  
 ; Sequence 13, Application US/09117217  
 ; Patent No. 6221578  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERTOGS, Kurt  
 ; APPLICANT: PAUWELS, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; TITLE OF INVENTION: OF HUMAN HIV STRAINS  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/117,217  
 ; CURRENT FILING DATE: 1998-07-24  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 13  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (750)..(2435)  
 ; OTHER INFORMATION: Reverse Transcriptase  
 US-09-117-217-13

Query Match 44.9%; Score 1106.8; DB 3; Length 2601;  
 Best Local Similarity 68.3%; Pred. No. 2.6e-173;  
 Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;  
 Qy 43 GCCAATCTCTGATGACGCGCAGCACTTCAAGGGCCCAAGCGCATCATCAATGCTTC 102  
 Db 109 GCTACCAATATGATGTCAGAGAGGCAATTTTAGGAACCAAAAGAAAGATTGTTAAGTGTTC 168  
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 QY 1345 TTCCCTGTGATGGGCTTACAGAGCTGACCCCGACAGTGAAGCCGTGACGCCATCGAGCTG 1404  
 Db 1428 TTCCCTTGGATGGGTTATGAATCCATCCGTGATTAAGACAGTACAGCTTATAGTCTG 1487  
 QY 1405 CCCGAGAGAGAGCTGACCCGTGAACGACATCCAGAGTGTGTGGGCAAGCTGAATCTGG 1464  
 Db 1488 CCGAAAAAGACAGCTGACCTGCAATGACATACAGAGTGAATGGGGAAATGAATTGG 1547  
 QY 1465 GCCAGCAGATCTACCCCGGCAATCAAGGTGGCCAGTGGCAGTGGCCGCCGCCGCC 1524  
 Db 1548 GCAAGTCAAGTTTACCGAGGATTTAAGTAAAGCAATTAATGTAATCTCTTAAAGAGAAC 1607  
 QY 1525 AAGGCCCTGACCGACATCTGTGCCCTGACCGAGAGAGCCGAGCTGAGCTGGCCGAGAAC 1584  
 Db 1608 AAGACCTAACAGAGTAATACACATAACAGAGAGAGAGAGTACGACTGGCAGAGAAAC 1667  
 QY 1585 CCGGAGATCTGGCGGAGCCCGTGCACGCGCTGTACTAGACCCCGAGCAAGACTGGTG 1644  
 Db 1668 AGAGAGATTCTAAAGAACAGTACATGAGTGTATTATGACCATCAAAAAGACTTAATA 1727  
 QY 1645 GCCGAGATCCAGAGAGAGGAGCCAGACCGAGTGAACCTACAGATCTACAGAGGCCCTTC 1704  
 Db 1728 GCGAATATACAGAGAGAGGAGGCAAGGCCAATGACATATTAATTAATCAAGGCATTT 1787  
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 Db 1788 AAAAAATCTGAAAAACAGAAAAATATGCAAGAAATAGGGGAGTCCACACTAATGATGAAAA 1847  
 QY 1765 CAGCTACCGAGAGCCGTGAGAGATCGCATGAGAGATCTGTGATCTGGGGCAAGACC 1824  
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 QY 1825 CCGAATTCGCGCTGCGCATCCAGAGAGAGACTGGGAGACTGTGAGCCGACTCTG 1884  
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 QY 1885 CAGGCCACTGATCCCCGAGTGGGAGTTCTGTAACACCCGCCCTGTGTGAAGCTGTGG 1944  
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 Db 2088 AACAGGAGAGCTAAATTAGGAAAGAGAGATATGTTACTAATAGAGAGAGCAAAAGTT 2147  
 QY 2065 GTGAGCTTACCGAGACACCAACCAAGAGACCGAGCTGAGGCAATCAAGCTGGCCCTG 2124  
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Db 2388 CAGTAGATTAATTAATGTCAGTCTGGAATCAGAAAGTACTATTTTATAGATGAATAGAT 2447  
 RESULT 11  
 US-09-735-487-7  
 ; Sequence 7, Application US/09735487  
 ; Patent No. 6528251  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERTOGS, Kint  
 ; APPLICANT: FAWELS, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/735,487  
 ; PRIOR FILING DATE: 2000-12-14  
 ; PRIOR APPLICATION NUMBER: 09/117,217  
 ; PRIOR FILING DATE: 1998-07-24  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 7  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (1)..(492)  
 ; OTHER INFORMATION: gag Polypeptide  
 ; US-09-735-487-7

Query Match 44.9%; Score 1106.8; DB 4; Length 2601;  
 Best Local Similarity 68.3%; Pred No. 2.6e-173;  
 Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;  
 QY 43 GCGAATCTGATGTCAGCGAGCAACTTCAAGGGCCCAAGCGCATCATCAAGTCTTC 102  
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 Db 229 TGGAAATGGAAGAGAGAGGACCAATGAAAGATTGACTGAGAGAGAGCTAA-TTT 287  
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## RESULT 12

US-09-735-487-9  
; Sequence 9, Application US/09735487  
; Patent No. 6528251  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kurt  
; APPLICANT: PAUWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; TITLE OF INVENTION: OF HUMAN HIV STRAINS  
; FILE REFERENCE: 1377-125P  
; CURRENT APPLICATION NUMBER: US/09/735,487  
; CURRENT FILING DATE: 2000-12-14  
; PRIOR APPLICATION NUMBER: 09/117,217  
; PRIOR FILING DATE: 1998-07-24  
; NUMBER OF SEQ ID NOS: 15  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 9  
; LENGTH: 2601  
; TYPE: DNA  
; ORGANISM: HIV-HXB2  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (334)..(489)  
; OTHER INFORMATION: gag P6 (52 AA)  
US-09-735-487-9

Query Match 44.9%; Score 1106.8; DB 4; Length 2601;  
 Best Local Similarity 68.3%; Pred. No. 2,6e-173;  
 Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;

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RESULT 13
US-09-735-487-11
; Sequence 11, Application US/09735487
; Patent No. 6528251
; GENERAL INFORMATION:
; APPLICANT: Gs BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Kurt
; APPLICANT: PAUWELS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/735,487
; CURRENT FILING DATE: 2000-12-14
; PRIOR APPLICATION NUMBER: 09/117,217
; PRIOR FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (453)...(749)
; OTHER INFORMATION: Protease
US-09-735-487-11

Query Match 44.9%; Score 1106.8; DB 4; Length 2601;
Best Local Similarity 68.3%; Pred. No. 2.6e-173;
Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;

Qy 43 GCCAACATCCTGATGAGCGCAGCAACTTCAAGGGGCCCAAGCGCATCATCAAGTGTCTTC 102
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 QY 1765 CAGCTGACCGAGGCGCTGCAGAAAGATCCCATGAGACATCGTATCTGCGGCGAAGACC 1824  
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 QY 1825 CCCAAGTTCGCGCTGCCATCCAGAGAGACCTGCGGAGACTGCTGACCTACTG 1884  
 Db 1908 CCTAAATTTAACTGCCATACAAAGAGAAACATGCGAAACATGCTGACAGAGATTTG 1967  
 QY 1885 CAGGCGACCTGATCCCCGAGTGGGAGTTCTGTAACACCCCCCTGCTGAGCTG 1944  
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 QY 1945 TACCACTGAGAAAGAGCCCATCATCGGCGCGAGACCTTCTACGTGAGCGCGCC 2004  
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 QY 2005 AACCGCGAGACCAAGATGGGCAAGCCCGCTACGTGACCGACCGGCGCGGAGAAATC 2064  
 Db 2088 AACGAGGAGACTTAATTAGGAAAGACAGATATGTATTAAGAGAAACAAAAAGTT 2147  
 QY 2065 GTGAGCTGACCGAGACCAACCAAGAGACCGAGCTGAGGCGCATCAGCTGCGCTG 2124  
 Db 2148 GTCACTGATGACCAACCAATAGAGAGCTGATGACAGCAATTTATCTAGCTTG 2207  
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 Db 2208 CAGGATTCGGATTAGAAAGTAAACATAGTAAACAGACTACATATATGCAATTGGAATCAT 2267  
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RESULT 14  
 US-09-735-487-13  
 ; Sequence 13, Application US/09735487  
 ; Patent No. 6528251  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERTOGS, Rudi  
 ; APPLICANT: PAUMES, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/735,487  
 ; CURRENT FILING DATE: 2000-12-14

; PRIOR APPLICATION NUMBER: 09/117,217  
 ; PRIOR FILING DATE: 1998-07-24  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: Patent Ver. 2.0  
 ; SEQ ID NO 13  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (750)..(2435)  
 ; OTHER INFORMATION: Reverse Transcriptase  
 US-09-735-487-13

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Db	948	GACAGTACTAAATGGAGAAAAATTAGTAGATTTTCAGAGAACTTAAATAGAGAACTCAAGAC	1007
QY	931	TTCTGGGAGGTGAGCTGGGCATCCGCCACCCCGCGCGCTGAAGAAGAAGACGCTG	990
Db	1008	TTCTGGGAAGTTCAATTAGGAATACACATCCCGCAGGCTTAAAAAAGAAAAAATCAGTA	1067
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Db	1368	CAACATCTGTTGAGTGGGAGCTTACCAACACAGACMAAAAAATCAGAAAGAACTCCA	1427
QY	1345	TTCTGTGGTATGGGCTACGAGCTGCACCCCGACAAGTGGACCGTGCAGCCCATCGAGCTG	1404
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Db	1488	CCAGAAAAAGACAGCTGGACTGTCAATGACATACAGAAGTTAGTGGGGAATTTGAATGG	1547
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QY	1645	GCGCAGATCCAGAGCAGGGCCACGACCACTGGACCTACAGATCTACAGGAGCCCTTC	1704
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QY	1705	AAGAACTGAGACCGGCAAGTAGTCGCAAGTATGCGCACCGGCCACACCAACAGAGTGAAG	1764
Db	1788	AAAATCTGAAAACAGAAAAATATGCAAGAAATGAGGGGTGCCACACTAATGATGTAAAA	1847
QY	1765	CAGCTGACCGAGGCGTGCAAGAGATCGCATGGAGAGCATGTGTCTCGGCGCAAGACC	1824
Db	1848	CAATTACAGAGGAGTGCAAAAAATTAACACAGAAAGCATAGTAATATGGGAAAGACT	1907
QY	1825	CCCAAGTTCGCGCTGCCCATCCAGAAGGAGACTCTGGGAGACCTGGTGGACCGCACTCTG	1884
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QY	1885	CAGGCCACTTGGATCCCGAGTGGGAGTTTCGTGAACACCCCCCCCCTGTGTGAAGCTGTG	1944
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Qy	2005	AACGCGAGACCAAGATCGCGAGGCGGCTAGCTGACCGACCGGCGCGGCGGAGAGATC	2064
Db	2088	AACAGGAGAGCTAAATTAGGAAAGCAGGATATGTTACTTAAATAGAGGAGACAAAAGTT	2147
Qy	2065	GTGAGGCTGACCGAGACCAACCAAGAGACGAGCTGCAGGCCATCCAGCTGGGCCCTG	2124
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Db	2268	CAAGCACACCAAGATCAAGTGAATCAGAGTTAGTCAATCAATATATAGCAGTTAATA	2327
Qy	2245	AAGAAGGAGAGGTGTACTCTGAGCTGGGTGCCCGCCACAAAGGCATCGCGCGCAACGAG	2304
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; Sequence 1, Application US/09552950			
; Patent No. 6541248			
; GENERAL INFORMATION:			
; APPLICANT: Oxford Biomedica (UK) Limited			
; TITLE OF INVENTION: Anti-Viral Vectors			
; FILE REFERENCE: 674524-2004			
; CURRENT APPLICATION NUMBER: US/09/552,950			
; CURRENT FILING DATE: 2000-04-20			
; NUMBER OF SEQ ID NOS: 22			
; SOFTWARE: Patent In Ver. 2.1			
; SEQ ID NO 1			
; LENGTH: 4307			
; TYPE: DNA			
; ORGANISM: Human immunodeficiency virus			
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Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;			
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Qy	103	AATCGGCGAAGGAGGCGCCATCGCCGCAACTGCGCGCCCCCGCCAAAGAGGGCTGC	162
Db	1180	AATTGTGGCAAGAGGGGCAACAGCAGAAATTCAGGGCCCCCTAGGAAAAAGGCTGT	1239
Qy	163	TGGAAGTGGCGGAAGGAGGGGCCACAGATGAAGGACTGCACCGAGGCCAGGCCAACTTC	222
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 Job time : 123.333 secs

GenCore version 5.1.6  
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OM nucleic - nucleic search, using sw model

Run on: October 12, 2003, 12:35:37 ; Search time 435.667 Seconds  
(without alignments)  
14689.518 Million cell updates/sec

Title: US-09-610-313-31

Perfect score: 2463

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Scoring table: IDENTITY\_NUC

Gapop 10.0 , Gapext 1.0

Searched: 1731049 segs, 1297405648 residues

Total number of hits satisfying chosen parameters: 3462098

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications NA:\*

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- 2: /cgn2\_6/ptodata/2/pubpna/PCT\_NEW\_PUB.seq.\*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	2430.2	98.7	2457	12	US-10-190-435-45
3	2422.6	98.4	2445	12	US-10-190-435-43
4	2415.6	98.1	3930	12	US-10-190-435-9
5	2414	98.0	3930	12	US-10-190-435-10
6	2414	98.0	3930	12	US-10-190-435-11
7	2414	98.0	5184	12	US-10-190-435-58
8	2383.6	96.8	3531	12	US-10-190-435-13
9	2382	96.7	3537	12	US-10-190-435-14
10	2382	96.7	3537	12	US-10-190-435-15
11	2381	96.7	5145	12	US-10-190-435-12
12	2322.6	94.3	3607	12	US-10-190-435-48
13	2322.6	94.3	3624	12	US-10-190-435-47
14	2304.4	93.6	3597	12	US-10-190-435-46
15	2142	87.0	2466	12	US-10-241-009-31
16	2122.8	86.2	2472	12	US-10-241-009-32

17	2115.2	85.9	2460	12	US-10-241-009-30
18	2114.2	85.8	3564	12	US-10-241-009-13
19	2114.2	85.8	3564	12	US-10-241-009-14
20	2113.6	85.8	4716	12	US-10-190-435-17
21	2109.8	85.7	3999	12	US-10-241-009-9
22	2108.2	85.6	3999	12	US-10-241-009-10
23	2108.2	85.6	3999	12	US-10-241-009-11
24	2108.2	85.6	5283	12	US-10-241-009-54
25	2108	85.6	4713	12	US-10-190-435-59
26	2107.6	85.6	3462	12	US-10-190-435-16
27	2082.2	84.5	3735	12	US-10-241-009-34
28	2075.2	84.3	5274	12	US-10-241-009-12
29	2014	81.8	3639	12	US-10-241-009-33
30	1998.6	81.1	3636	12	US-10-241-009-56
31	1968.4	79.9	1971	12	US-10-190-435-49
32	1953.6	79.3	3231	12	US-10-190-435-60
33	1948.8	79.1	3234	12	US-10-190-435-51
34	1941.6	78.8	1965	12	US-10-190-435-50
35	1891.8	76.8	4773	12	US-10-241-009-16
36	1883	76.5	3496	12	US-10-241-009-15
37	1883	76.5	4773	12	US-10-241-009-55
38	1880.6	76.4	2145	12	US-10-241-009-35
39	1806.8	73.4	2262	12	US-10-241-009-39
40	1798.2	73.0	1971	12	US-10-241-009-38
41	1783.8	72.4	3261	12	US-10-241-009-57
42	1781.2	72.3	1989	12	US-10-241-009-47
43	1779.2	72.2	3264	12	US-10-241-009-43
44	1779	72.2	1977	12	US-10-241-009-41
45	1778.4	72.2	3252	12	US-10-241-009-42

ALIGNMENTS

RESULT 1

US-10-190-435-44  
; Sequence 44, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEGEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; FILE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: P18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 44  
; LENGTH: 2457  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: p2Polopt.YM\_C  
US-10-190-435-44

Query Match	99.7%	Score 2455.4	DB 12	Length 2457
Best Local Similarity	100.0%	Pred. No. 0		
Matches 2456	Conservative 0	Mismatches 1	Indels 0	Gaps 0
QY	1	GTCTAGCGCCACCATGCGCGAGCCCATGAGCGCCACCGAGCGCCACCATCTCTGATGCGAG 60		
Db	1	GTCTAGCGCCACCATGCGCGAGCCCATGAGCGCCACCGAGCGCCACCATCTCTGATGCGAG 60		
QY	61	CGCAGCACTTCAAGGGCCCGAGCGCATCATCAAGTCTTCAACTGCGGCAAGAGGGC 120		
Db	61	CGCAGCACTTCAAGGGCCCGAGCGCATCATCAAGTCTTCAACTGCGGCAAGAGGGC 120		
QY	121	CACATCGCCCGCAACTGCGCGCCCGCCGAGAGGGCTGCTGAAGTGGCGGCGAGGAG 180		

Db 121 CACATCGCCCGCACTGCGCGCCCCCGGCAAGAGGCTGCTGGAAGTGCGGCAAGAG 180  
 Qy 181 GGCACCAAGATGAAGAACTGCAACGAGCGCCAGGCAACTTCTTCGCGAGGACTGCGC 240  
 Db 181 GGCACCAAGATGAAGAACTGCAACGAGCGCCAGGCAACTTCTTCGCGAGGACTGCGC 240  
 Qy 241 TTTCCCGCAGGCGCAAGGCTGCGCGTCCCGACGAGCAAGACCGGCGCAACAGCCCAAC 300  
 Db 241 TTTCCCGCAGGCGCAAGGCTGCGCGTCCCGACGAGCAAGACCGGCGCAACAGCCCAAC 300  
 Qy 301 AGCCCGAGCTGCAAGTGCAGCGGCAACACCCCGCAAGAGCGCGCGCGAGCGCGAG 360  
 Db 301 AGCCCGAGCTGCAAGTGCAGCGGCAACACCCCGCAAGAGCGCGCGCGAGCGCGAG 360  
 Qy 361 GGCACCTGAATCTTCCCGCAATCAACCTGTGAGGCGCGCCCTGTGTGAGATCAAGGTG 420  
 Db 361 GGCACCTGAATCTTCCCGCAATCAACCTGTGAGGCGCGCCCTGTGTGAGATCAAGGTG 420  
 Qy 421 GCGCGCCAGATCAAGAGAGCGCTGCTGGAACCGCGCGCGCAACGACACCGTGTGAGAG 480  
 Db 421 GCGCGCCAGATCAAGAGAGCGCTGCTGGAACCGCGCGCGCAACGACACCGTGTGAGAG 480  
 Qy 481 ATGAGCTGCGCGGCAAGTGAAGCGCCCAAGATGAGCGCGCTTCACTCAAG 540  
 Db 481 ATGAGCTGCGCGGCAAGTGAAGCGCCCAAGATGAGCGCGCTTCACTCAAG 540  
 Qy 541 GTGCGCCAGTACGACCAAGTCTGATCGAGATCTGCGGCAAGAGGCACTGCGCGCTG 600  
 Db 541 GTGCGCCAGTACGACCAAGTCTGATCGAGATCTGCGGCAAGAGGCACTGCGCGCTG 600  
 Qy 601 CTGATCGGCGCGCGCGCGTGAACATCATCGCGCGCAACATGCTGAGCCAGCTGAGCTG 660  
 Db 601 CTGATCGGCGCGCGCGCGTGAACATCATCGCGCGCAACATGCTGAGCCAGCTGAGCTG 660  
 Qy 661 ACCCTGAATCTTCCCATGACGCGCGCATGAGACCGCGCGTGAAGCTGAGCGCGCTG 720  
 Db 661 ACCCTGAATCTTCCCATGAGCGCGCATGAGACCGCGCGTGAAGCTGAGCGCGCTG 720  
 Qy 721 GACGCGCGCGCAAGTGAAGAGTGCCTGACCGGAGAGAGATCAAGGCGCTGAGCGCGC 780  
 Db 721 GACGCGCGCGCAAGTGAAGAGTGCCTGACCGGAGAGAGATCAAGGCGCTGAGCGCGC 780  
 Qy 781 ATCTGCGAGAGATGGAAGAGAGGCGCAAGATCAACCAAGATGCGCGCGCGAGAAC 840  
 Db 781 ATCTGCGAGAGATGGAAGAGAGGCGCAAGATCAACCAAGATGCGCGCGCGAGAAC 840  
 Qy 841 AACACCGCGCGTTCGCGCATCAAGAGAGAGCAACCAAGTGCAGAGTGTGTGAC 900  
 Db 841 AACACCGCGCGTTCGCGCATCAAGAGAGAGCAACCAAGTGCAGAGTGTGTGAC 900  
 Qy 901 TTTCCCGCAGCTGAACAGAGCAACGAGACTTCTGAGAGTGCAGCTGAGCGCATCCCGC 960  
 Db 901 TTTCCCGCAGCTGAACAGAGCAACGAGACTTCTGAGAGTGCAGCTGAGCGCATCCCGC 960  
 Qy 961 CCGCGCGCGCTGGAAGAGAGAGCGTGCCTGAGAGTGCAGCTGAGCGCGCGCTTACTT 1020  
 Db 961 CCGCGCGCGCTGGAAGAGAGAGCGTGCCTGAGAGTGCAGCTGAGCGCGCGCTTACTT 1020  
 Qy 1021 AGCGTGCCTGGAAGAGAGACTTCCGCAAGTACACCGCGCTTCAACATCCCGCAGCTGAC 1080  
 Db 1021 AGCGTGCCTGGAAGAGAGACTTCCGCAAGTACACCGCGCTTCAACATCCCGCAGCTGAC 1080  
 Qy 1081 AACGAGACCGCGCGCATCGCTACCAAGTACCAAGTGTGCGCCAGGCGTGAAGGCGAGC 1140  
 Db 1081 AACGAGACCGCGCGCATCGCTACCAAGTACCAAGTGTGCGCCAGGCGTGAAGGCGAGC 1140  
 Qy 1141 CCGCAGATCTTCCAGAGAGAGTGAACCAAGATCTGAGAGCGCTTCCGCGCGCGCAACCC 1200  
 Db 1141 CCGCAGATCTTCCAGAGAGAGTGAACCAAGATCTGAGAGCGCTTCCGCGCGCGCAACCC 1200  
 Qy 1201 GAGATCTGATCTACAGGCGCGCGCTGATCGTGGCGAGAGACTGAGAGATGCGCGCGAG 1260  
 Db 1201 GAGATCTGATCTACAGGCGCGCGCTGATCGTGGCGAGAGACTGAGAGATGCGCGCGAG 1260

Qy 1261 CGCGCAAGATCGAGAGCTGCGCAAGCAACCTGTGCGTGGGCTTCAACACCGCGGAC 1320  
 Db 1261 CGCGCAAGATCGAGAGCTGCGCAAGCAACCTGTGCGTGGGCTTCAACACCGCGGAC 1320  
 Qy 1321 AAGAGACCAAGAGAGGCGCGCTTCTGTGAGTGGGCTTCAAGCTGACCGCGAGAG 1380  
 Db 1321 AAGAGACCAAGAGAGGCGCGCGCTTCTGTGAGTGGGCTTCAAGCTGACCGCGAGAG 1380  
 Qy 1381 TGAACCTGCAAGCTGCGAGCTGCGAGAGAGAGCTGAGACCGTGAACGACATCCAG 1440  
 Db 1381 TGAACCTGCAAGCTGCGAGCTGCGAGAGAGAGCTGAGACCGTGAACGACATCCAG 1440  
 Qy 1441 AAGCTGTGGGCAAGCTGGAACCTGCGAGAGAGTCAACCGCGCATCAAGTGCAGAG 1500  
 Db 1441 AAGCTGTGGGCAAGCTGGAACCTGCGAGAGAGTCAACCGCGCATCAAGTGCAGAG 1500  
 Qy 1501 CTGTGCAAGCTGCG 1560  
 Db 1501 CTGTGCAAGCTGCG 1560  
 Qy 1561 GCGAGCTGAGAGCTGCGCGAGAGACCGCGAGATCTGTGCGCGAGCGCGCGCGCTGAC 1620  
 Db 1561 GCGAGCTGAGAGCTGCGCGAGAGACCGCGAGATCTGTGCGCGAGCGCGCGCGCTGAC 1620  
 Qy 1621 TACGACCGCGCAAGAGAGCTGTGCGAGAGTCCAGAGAGAGGCGCGAGCGAGTGAAC 1680  
 Db 1621 TACGACCGCGCAAGAGAGCTGTGCGAGAGTCCAGAGAGAGGCGCGAGCGAGTGAAC 1680  
 Qy 1681 TACGAGTCTTACAGAGAGCGCTTCAAGAACCTGAGAGACCGCGCAAGTACCGCAAGTGC 1740  
 Db 1681 TACGAGTCTTACAGAGAGCGCTTCAAGAACCTGAGAGACCGCGCAAGTACCGCAAGTGC 1740  
 Qy 1741 ACCGCGCAAGCAAG 1800  
 Db 1741 ACCGCGCAAGCAAG 1800  
 Qy 1801 AGCATGCTGATCTGCGCGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1860  
 Db 1801 AGCATGCTGATCTGCGCGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1860  
 Qy 1861 GAGAGCTGTGAG 1920  
 Db 1861 GAGAGCTGTGAG 1920  
 Qy 1921 ACCCGCGCGCTGTGAG 1980  
 Db 1921 ACCCGCGCGCTGTGAG 1980  
 Qy 1981 ACCTTCAAGTGAAG 2040  
 Db 1981 ACCTTCAAGTGAAG 2040  
 Qy 2041 ACCGAGCGGCGCGCGAG 2100  
 Db 2041 ACCGAGCGGCGCGCGAG 2100  
 Qy 2101 CTTGAGGCGCATCAAGCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2160  
 Db 2101 CTTGAGGCGCATCAAGCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2160  
 Qy 2161 AGCGAGTGCCTGCG 2220  
 Db 2161 AGCGAGTGCCTGCG 2220  
 Qy 2221 AACGAGTCAATCGAG 2280  
 Db 2221 AACGAGTCAATCGAG 2280  
 Qy 2281 CACAAGGCGCATCGAG 2340  
 Db 2281 CACAAGGCGCATCGAG 2340

QY 2341 GTGCTGTTCTGACGGGATCGATGCGGGATCTGTATCTTACCAGTACATGAGACGACCTG 2400  
Db 2341 GTGCTGTTCTGACGGGATCGATGCGGGATCTGTATCTTACCAGTACATGAGACGACCTG 2400  
QY 2401 TAGTGGGACGCGGGCCCTAGGATCGATTAAAGCTTCCCGGGGTAGCACCGGT 2457  
Db 2401 TAGTGGGACGCGGGCCCTAGGATCGATTAAAGCTTCCCGGGGTAGCACCGGT 2457

RESULT 2  
US-10-190-435-45  
; Sequence 45, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEDEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; FILE REFERENCE: PP18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 45  
; LENGTH: 2457  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: p2Polopt\_C  
US-10-190-435-45

Query Match 98.7%; Score 2430.2; DB 12; Length 2457;  
Best Local Similarity 99.8%; Pred. No. 0;  
Matches 2448; Conservative 0; Mismatches 3; Indels 6; Gaps 1;

QY 7 GCCACCATGGCGAGGCCATGAGCCAGGCCACAGCGCCCAACATCTGTATGAGCGCAGC 66  
Db 1 GCCACCATGGCGAGGCCATGAGCCAGGCCACAGCGCCCAACATCTGTATGAGCGCAGC 60  
QY 67 AACTTCAAGGGCCCCAAGCGCATCATCAAGTGTTCAACTGCGGCAAGGAGGCCACATC 126  
Db 61 AACTTCAAGGGCCCCAAGCGCATCATCAAGTGTTCAACTGCGGCAAGGAGGCCACATC 120  
QY 127 GCGCGCAACTGCGCGCCGCCCGCCAGAGAGGGGTGCTGGAAGTGGCGGCAAGGAGGCCAC 186  
Db 121 GCGCGCAACTGCGCGCCGCCCGCCAGAGAGGGGTGCTGGAAGTGGCGGCAAGGAGGCCAC 180  
QY 187 CAGATGAAGGACTGACACCGAGCGCCAGGCCAACTTCTTCGCGAGGACCTGGGCTTCCCC 246  
Db 181 CAGATGAAGGACTGACACCGAGCGCCAGGCCAACTTCTTCGCGAGGACCTGGGCTTCCCC 240  
QY 247 CAGGCAAGGCCCGCGAGTTCCCGAGGAGAGAACCGCGCCAAACAGCCGCCACACGCGC 306  
Db 241 CAGGCAAGGCCCGCGAGTTCCCGAGGAGAGAACCGCGCCAAACAGCCGCCACACGCGC 300  
QY 307 GAGTCCAGGTGGCGGCGACACACCCCGCAGGAGCGCGCGCGCGCAGGCGCAC 366  
Db 301 GAGTCCAGGTGGCGGCGACACACCCCGCAGGAGCGCGCGCGCGCAGGCGCAC 360  
QY 367 CTGAATCTCCCGCAGATCACTGTGGCAGCGCCCTGTGTAGATCAAGGTGGCGCGC 426  
Db 361 CTGAATCTCCCGCAGATCACTGTGGCAGCGCCCTGTGTAGATCAAGGTGGCGCGC 420  
QY 427 CAGATCAAGGAGGCCCTGTGTGACACCGCGCGCGAGCACACCGTGTGTGAGGAGATGAGC 486  
Db 421 CAGATCAAGGAGGCCCTGTGTGACACCGCGCGCGAGCACACCGTGTGTGAGGAGATGAGC 480  
QY 487 CTGCGCGCAAGTGAAGGCCAAGATGATGCGCGGATCGGCGGCTTCAATCAAGGTGCGC 546  
Db 481 CTGCGCGCAAGTGAAGGCCAAGATGATGCGCGGATCGGCGGCTTCAATCAAGGTGCGC 540

QY 547 CAGTACGACCAAGATCTCTGATCGAGATCTCGGCAAGAGGCCATCGGCAACCGTGTGATC 606  
Db 541 CAGTACGACCAAGATCTCTGATCGAGATCTCGGCAAGAGGCCATCGGCAACCGTGTGATC 600  
QY 607 GSCCCCAACCCCGTGAACATCATCGGCCGCAACATGCTGACCCAGCTGGGCTGACCCCTG 666  
Db 601 GSCCCCAACCCCGTGAACATCATCGGCCGCAACATGCTGACCCAGCTGGGCTGACCCCTG 660  
QY 667 AACTTCCCATCAGCCCCCATCGAGACCCGTCGCGTGAAGCTGAAGCCCGGATGGAACGGC 726  
Db 661 AACTTCCCATCAGCCCCCATCGAGACCCGTCGCGTGAAGCTGAAGCCCGGATGGAACGGC 720  
QY 727 CCAAGGTGAAGCAGTGGCCCTGACCCGAGGAGAGATCAAGGCCCTGACCCGCTGTC 786  
Db 721 CCAAGGTGAAGCAGTGGCCCTGACCCGAGGAGAGATCAAGGCCCTGACCCGCTGTC 780  
QY 787 GAGGAGATGGAAGAGGCGCAAGATCAACAAGATCGGCCCGCGAGAACCCCTTACAACACC 846  
Db 781 GAGGAGATGGAAGAGGCGCAAGATCAACAAGATCGGCCCGCGAGAACCCCTTACAACACC 840  
QY 847 CCGCTGTTCCCATCAAGAAAGAGAGACACAAAGTGGCGCAAGCTGTGTGACTTCCGC 906  
Db 841 CCGCTGTTCCCATCAAGAAAGAGAGACACAAAGTGGCGCAAGCTGTGTGACTTCCGC 900  
QY 907 GAGCTGAACAAGCGCACCCAGGACTTCTGGGAGGTGCACTGGGCATCCCCACCCCGCC 966  
Db 901 GAGCTGAACAAGCGCACCCAGGACTTCTGGGAGGTGCACTGGGCATCCCCACCCCGCC 960  
QY 967 GGCCTGAAGAAGAAGAAGCGTGAACCGTGTGAGCGTGGCGGACGCTTACCTTACGCTG 1026  
Db 961 GGCCTGAAGAAGAAGAAGCGTGAACCGTGTGAGCGTGGCGGACGCTTACCTTACGCTG 1020  
QY 1027 CCGCTGGACGAGACTTCGGGAAGTACACCGCTTCAACATCCCGAGCATCAACAACGAG 1086  
Db 1021 CCGCTGGACGAGACTTCGGGAAGTACACCGCTTCAACATCCCGAGCATCAACAACGAG 1080  
QY 1087 ACCCCCGGATCCGCTACAGTACAAAGTGTGCTGCCCGAGGCTGGAAGGAGCCCGCAGC 1146  
Db 1081 ACCCCCGGATCCGCTACAGTACAAAGTGTGCTGCCCGAGGCTGGAAGGAGCCCGCAGC 1140  
QY 1147 ATCTTCCAGAGCAGCATGACCAAGATCTTGAAGCCCTTCCGCGCCCGCAACCCCGAGATC 1206  
Db 1141 ATCTTCCAGAGCAGCATGACCAAGATCTTGAAGCCCTTCCGCGCCCGCAACCCCGAGATC 1200  
QY 1207 GTGATCTACCA-----GGCCCCCTGTACGTGGGCGAGCGACTGTGAGATCGGCCAGCAC 1260  
Db 1201 GTGATCTACCAAGCATGAGACGACCTGTACGTGGGCGAGCGACTGTGAGATCGGCCAGCAC 1260  
QY 1261 CCGCGCAAGATCGAGAGCTGCGCAAGCACCTGCTCGCTGGGGCTTACACCCCGCGAC 1320  
Db 1261 CCGCGCAAGATCGAGAGCTGCGCAAGCACCTGCTCGCTGGGGCTTACACCCCGCGAC 1320  
QY 1321 AAGAAGCACCAAGAGAGCCCGCTTCTGTGGATGGGCTACGAGCTGCACCCCGCAACAG 1380  
Db 1321 AAGAAGCACCAAGAGAGCCCGCTTCTGTGGATGGGCTACGAGCTGCACCCCGCAACAG 1380  
QY 1381 TGAACCGTGCAGCCCATGAGCTGCCGAGAAAGAGAGCTGGAACCGTGAACGACTTCCAG 1440  
Db 1381 TGAACCGTGCAGCCCATGAGCTGCCGAGAAAGAGAGCTGGAACCGTGAACGACTTCCAG 1440  
QY 1441 AAGCTGTGGGCAAGCTGAATGGGCCAGCGAGATCTACCCCGGATCAAGGTGGCGCAG 1500  
Db 1441 AAGCTGTGGGCAAGCTGAATGGGCCAGCGAGATCTACCCCGGATCAAGGTGGCGCAG 1500  
QY 1501 CTGTGCAAGCTGCTCGCGGGCGCCAAAGCCCTTGAACGACATCGTCCCTGACCCGAGAG 1560  
Db 1501 CTGTGCAAGCTGCTCGCGGGCGCCAAAGCCCTTGAACGACATCGTCCCTGACCCGAGAG 1560  
QY 1561 GCCAGCTTGGAGCTGGCCGAGAACCGCGAGATCTTGGCGGAGCCCGTGCACGCGGTGTAC 1620  
Db 1561 GCCAGCTTGGAGCTGGCCGAGAACCGCGAGATCTTGGCGGAGCCCGTGCACGCGGTGTAC 1620

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QY 1621 TACGACCCCGACGAAGGACTGTGGCCGAGATCCAGAGAGGCGACGACCACTGTGACC 1680
Db 1621 TACGACCCCGACGAAGGACTGTGGCCGAGATCCAGAGAGGCGACGACCACTGTGACC 1680
QY 1681 TACGAGATCTACGAGAGCCCTTCAAGAACTGAAAGACGGCGAAGTACGCCAAGATGGCC 1740
Db 1681 TACGAGATCTACGAGAGCCCTTCAAGAACTGAAAGACGGCGAAGTACGCCAAGATGGCC 1740
QY 1741 ACCGCGCCACACCAAGAGAGTGAAGAGTGAACCGAGGCGCGTGAAGAAAGATGCGCATGGAG 1800
Db 1741 ACCGCGCCACACCAAGAGAGTGAAGAGTGAACCGAGGCGCGTGAAGAAAGATGCGCATGGAG 1800
QY 1801 AGCATCTGTGATCTGGGGGCAAGACCCCGCAAGTTCCGCCCTGCCCATCCAGAAAGAGACCTGG 1860
Db 1801 AGCATCTGTGATCTGGGGGCAAGACCCCGCAAGTTCCGCCCTGCCCATCCAGAAAGAGACCTGG 1860
QY 1861 GAGACCTGTGTGAGACCGACTACTGTGGCAGGCGACCTGGATCCCGAGTGGAGTTGTGAAAC 1920
Db 1861 GAGACCTGTGTGAGACCGACTACTGTGGCAGGCGACCTGGATCCCGAGTGGAGTTGTGAAAC 1920
QY 1921 ACCCGCGCCCTGTGTGAAGCTGTGTGACAGCTGGAGAGAGAGCCCATCATCGAGCGCGAG 1980
Db 1921 ACCCGCGCCCTGTGTGAAGCTGTGTGACAGCTGGAGAGAGAGCCCATCATCGAGCGCGAG 1980
QY 1981 ACCTTCTACGTGGAAGCGCGCGCAACCGGAGACCAAGATCGGCAAGCGCGCTACGCTG 2040
Db 1981 ACCTTCTACGTGGAAGCGCGCGCAACCGGAGACCAAGATCGGCAAGCGCGCTACGCTG 2040
QY 2041 ACCGACCGGGGCGCGCAAGAAATGTGTGAGCTGTGACCGAGACCAACCAAGAAAGACCGAG 2100
Db 2041 ACCGACCGGGGCGCGCAAGAAATGTGTGAGCTGTGACCGAGACCAACCAAGAAAGACCGAG 2100
QY 2101 CTGAGAGGCGCTTCAGCTGGCCCTGTGAGAGACAGCGGCAAGCGGTGAACATGTGTGACGAC 2160
Db 2101 CTGAGAGGCGCTTCAGCTGGCCCTGTGAGAGACAGCGGCAAGCGGTGAACATGTGTGACGAC 2160
QY 2161 AGCGAGTACGCGCTGTGGCATATCCAGGCGCGCAAGAGGAGTACCTGAGTGGGTGCGCGC 2220
Db 2161 AGCGAGTACGCGCTGTGGCATATCCAGGCGCGCAAGAGGAGTACCTGAGTGGGTGCGCGC 2220
QY 2221 AACGAGATCATGAGAGAGTGAATCAAGAGGAGAGTGTACCTGAGTGGGTGCGCGC 2280
Db 2221 AACGAGATCATGAGAGAGTGAATCAAGAGGAGAGTGTACCTGAGTGGGTGCGCGC 2280
QY 2281 CACAAGGCGCATCGCGCGCAACGAGAGATCCAGCAAGCTGTGAGGCAAGGCGATCCGCAAG 2340
Db 2281 CACAAGGCGCATCGCGCGCAACGAGAGATCCAGCAAGCTGTGAGGCAAGGCGATCCGCAAG 2340
QY 2341 GTGCTGTCTGTGAGCGGATGATGGCGGATCGTGTATCTACAGTACATGAGACGACCTG 2400
Db 2341 GTGCTGTCTGTGAGCGGATGATGGCGGATCGTGTATCTACAGTACATGAGACGACCTG 2400
QY 2401 TACGAGGCGAGCGGCGCGCTAGAGATGATTAAGCTCCCGGGGCGTACGACCGGT 2457
Db 2401 TACGAGGCGAGCGGCGCGCTAGAGATGATTAAGCTCCCGGGGCGTACGACCGGT 2457

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## RESULT 3

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US-10-190-435-43
; Sequence 43, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: P1813.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319

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; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 43
; LENGTH: 2445
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2Pol.opt.YMMW_C
US-10-190-435-43

Query Match      98.4%; Score 2422.6; DB 12; Length 2445;
Best Local Similarity 99.6%; Pred. No. 0;
Matches 2441; Conservative 0; Mismatches 4; Indels 6; Gaps 1;

QY 7 GCCACCATGCGCCAGGCGCATGAGCGAGGCGCACGAGCGCCCAACATCTCGATGAGCGAGC 66
Db 1 GCCACCATGCGCCAGGCGCATGAGCGAGGCGCACGAGCGCCCAACATCTCGATGAGCGAGC 60
QY 67 AACTTCAGGGGCGCCCAAGCGCATCATCAAGTGTCTTCAACTGCGGCAAGAGGCGCACATC 126
Db 61 AACTTCAGGGGCGCCCAAGCGCATCATCAAGTGTCTTCAACTGCGGCAAGAGGCGCACATC 120
QY 127 GCCCGCACTGCGCGCGCGCGCGCGCAAGAGAGGCGTGTGAGAGTGGCGGCAAGAGGCGAC 186
Db 121 GCCCGCACTGCGCGCGCGCGCGCGCAAGAGAGGCGTGTGAGAGTGGCGGCAAGAGGCGAC 180
QY 187 CAGATGAAGAGACTGACCGAGCGCGCAGGCGCACTTCTTCCGCGAGAGACTGACCTTCC 246
Db 181 CAGATGAAGAGACTGACCGAGCGCGCAGGCGCACTTCTTCCGCGAGAGACTGACCTTCC 240
QY 247 CAGGCGAAGCGCGCGAGTTCCTCCAGGAGCAGAACCCGCGCAACAGCCCAACCGCCG 306
Db 241 CAGGCGAAGCGCGCGAGTTCCTCCAGGAGCAGAACCCGCGCAACAGCCCAACCGCCG 300
QY 307 GAGCTGAGGTGCGCGCGCGCAACCCCGGAGCGAGGCGCGCGCGCGCGCGCGCGCGCGCGC 366
Db 301 GAGCTGAGGTGCGCGCGCGCGCAACCCCGGAGCGAGGCGCGCGCGCGCGCGCGCGCGCGC 360
QY 367 CTGAATTTCCCGCAGATCACTCTGTGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC 426
Db 361 CTGAATTTCCCGCAGATCACTCTGTGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC 420
QY 427 CAGATCAAGAGGCGCGCTGTGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC 486
Db 421 CAGATCAAGAGGCGCGCTGTGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC 480
QY 487 CTGCGCGCGCAAGTGAAGCGCCCAAGATGATCGCGCGCGCATCGCGCGCTTCATCAAGGTGCGC 546
Db 481 CTGCGCGCGCAAGTGAAGCGCCCAAGATGATCGCGCGCGCATCGCGCGCTTCATCAAGGTGCGC 540
QY 547 CAGTACGACAGATCTGATCGAGATCTGGCGCAAGAGGCGCATCGCGACCGTGTGATC 606
Db 541 CAGTACGACAGATCTGATCGAGATCTGGCGCAAGAGGCGCATCGCGACCGTGTGATC 600
QY 607 GCGCCCGACCCCGCGGAACATCATCTGCGCGCGCAACATGTGTACCCAGCTGGGCTGACCTG 666
Db 601 GCGCCCGACCCCGCGGAACATCATCTGCGCGCGCAACATGTGTACCCAGCTGGGCTGACCTG 660
QY 667 AACTTCCCATCAGCGCCCATCGAGACCGTGCCTGTGAAGCTGAAGCCCGCGCATGAGCGGC 726
Db 661 AACTTCCCATCAGCGCCCATCGAGACCGTGCCTGTGAAGCTGAAGCCCGCGCATGAGCGGC 720
QY 727 CCCAAGGTGAAGCGATGGCGCGCTGACCGAGAGAGAGTCAAGGCGCTGACCGCATCTGC 786
Db 721 CCCAAGGTGAAGCGATGGCGCGCTGACCGAGAGAGAGTCAAGGCGCTGACCGCATCTGC 780
QY 787 GAGGAGATGAGAGAGAGGCGCGCAAGTACCAAGATCGCGCGCGCGAGAACCCCTTACAACCC 846
Db 781 GAGGAGATGAGAGAGAGGCGCGCAAGTACCAAGATCGCGCGCGCGAGAACCCCTTACAACCC 840
QY 847 CCCGTGTTCGCATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 906
Db 841 CCCGTGTTCGCATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 900

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QY	907	GAGCTGAACAAAGCCGACCCAGGACTTTCTGGAGGTGCACTTGGGCATCCGCCACCCCGCC	966
DB	901	GAGCTGAACAAAGCCGACCCAGGACTTTCTGGAGGTGCACTTGGGCATCCGCCACCCCGCC	960
QY	967	GGCTGGAAGAGAGAGAGCGGTGACCGTGTCTGACGTGGCGACGCTTACTTCAGCGTG	1026
DB	961	GGCTGGAAGAGAGAGAGCGGTGACCGTGTCTGACGTGGCGACGCTTACTTCAGCGTG	1020
QY	1027	CCCTGTCAGCAGGACTTCCGCAAGTACACGCGCTTCAACCTCCCCAGCATCAACAACGAG	1086
DB	1021	CCCTGTCAGCAGGACTTCCGCAAGTACACGCGCTTCAACCTCCCCAGCATCAACAACGAG	1080
QY	1087	ACCCCGGCTATCCGCTACCACTAGTCAACGTGTGTGCCCCAGGGCTGGAAGGAGCGCCGAC	1146
DB	1081	ACCCCGGCTATCCGCTACCACTAGTCAACGTGTGTGCCCCAGGGCTGGAAGGAGCGCCGAC	1140
QY	1147	ATCTTCAGAGCAGCATGACCAAGATCCTGGAGCCCTTCGCGCCCGCAACCCCGAGATC	1206
DB	1141	ATCTTCAGAGCAGCATGACCAAGATCCTGGAGCCCTTCGCGCCCGCAACCCCGAGATC	1200
QY	1207	GTGATCTACAGGCCGCCCTTGACTGGGCGAGCAGCTTGAGATCGGCCCGCAACCCCGAC	1266
DB	1201	GTGATCTACAGGCCGCCCTTGACTGGGCGAGCAGCTTGAGATCGGCCCGCAACCCCGAC	1260
QY	1267	AAGATCGAGGAGCTGCGCAAGCACTGCTGCGTGGGGCTTACCAACCCCGCAAGAAG	1326
DB	1261	AAGATCGAGGAGCTGCGCAAGCACTGCTGCGTGGGGCTTACCAACCCCGCAAGAAG	1320
QY	1327	CACAGAAAGAGCCCGCTTCCGTGTGATGGGCTACGAGCTGCACCCGCAAGTGGAC	1386
DB	1321	CACAGAAAGAGCCCGCTTCCGTGTGATGGGCTACGAGCTGCACCCGCAAGTGGAC	1374
QY	1387	GTGCAGGCCATCGAGCTGCCGGAAGAGAGTGGACCGTGAACGACATCCAGAACTG	1446
DB	1375	GTGCAGGCCATCGAGCTGCCGGAAGAGAGTGGACCGTGAACGACATCCAGAACTG	1434
QY	1447	GTGGCAAGCTGAATCGGGCGAGCCAGATCTACCCCGCATCAAGTGCGCCAGCTGTGC	1506
DB	1435	GTGGCAAGCTGAATCGGGCGAGCCAGATCTACCCCGCATCAAGTGCGCCAGCTGTGC	1494
QY	1507	AAGTGTGTCGGCGCCAAAGGCCCTGACCGACATCTGTGCCCTGACCGGAGGCGCGAG	1566
DB	1495	AAGTGTGTCGGCGCCAAAGGCCCTGACCGACATCTGTGCCCTGACCGGAGGCGCGAG	1554
QY	1567	CTGGAGCTGCGCGAAGACCGCGAGATCTTGGCGAGCCGCTGACGCGCTGTACTACGAC	1626
DB	1555	CTGGAGCTGCGCGAAGACCGCGAGATCTTGGCGAGCCGCTGACGCGCTGTACTACGAC	1614
QY	1627	CCGACGAAGACTGTGTGGCCGAGATCCAGAAGCAGGCGCAACGACCTTACCGAG	1686
DB	1615	CCGACGAAGACTGTGTGGCCGAGATCCAGAAGCAGGCGCAACGACCTTACCGAG	1674
QY	1687	ATCTACAGAGCCCTTCAGAACTTGAACCGGCAAGTACGCCAGATGCGCACCGCC	1746
DB	1675	ATCTACAGAGCCCTTCAGAACTTGAACCGGCAAGTACGCCAGATGCGCACCGCC	1734
QY	1747	CACACCAACGACGTGAAGCAGCTGACCGAGCCGTGCAGAAGATCGCCATGAGAGCATC	1806
DB	1735	CACACCAACGACGTGAAGCAGCTGACCGAGCCGTGCAGAAGATCGCCATGAGAGCATC	1794
QY	1807	GTGATCTGGGCGAAGACCCCAAGTTCGCGCTGCCCTCCAGAACGAGAGACCTGGGAGAC	1866
DB	1795	GTGATCTGGGCGAAGACCCCAAGTTCGCGCTGCCCTCCAGAACGAGAGACCTGGGAGAC	1854
QY	1867	TGTTGGAACGACTACTGGCGGCCACTTGATCCCGAGTGGAGTTCGTGAACACCCCC	1926
DB	1855	TGTTGGAACGACTACTGGCGGCCACTTGATCCCGAGTGGAGTTCGTGAACACCCCC	1914
QY	1927	CCCTGTGTAAGCTGTGTGTAACGCTGGAGAGAGCCCATCATCGCGCGGAGACCTTC	1986
DB	1915	CCCTGTGTAAGCTGTGTGTAACGCTGGAGAGAGCCCATCATCGCGCGGAGACCTTC	1974
QY	1987	TACGTGACCGCGCGCCCAACCGCGAGACCAAGATCGGCAAGGCGCGCTACGTGACCGAC	2046

## RESULT 4

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US-10-190-435-9
; Sequence 9, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 9
; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagComplPolmut_C
; US-10-190-435-9

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	Query Match	98.1%;	Score 2415.6;	DB 12;	Length 3930;
	Best Local Similarity	99.6%;	Pred. No. 0;		
	Matches 2434;	Conservative 0;	Mismatches 4;	Indels 6;	Gaps 1;
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Db	1487	TGCGCAGAGCCATGAGCCAGGCCACACAGGCCCAACATCCTGATGACGCCGAGCAATTCA	1546		
QY	74	AGGGCCCCAAGCGCATCATCAAGTGTCTTCAA	TGCGGCCAAGAGAGGGCCCATATCGCCCGCA	133	
Db	1547	AGGGCCCCAAGCGCATCATCAAGTGTCTTCAA	CTGCGGCAAGAGAGGGCCCATATCGCCCGCA	1606	
QY	134	ACTGCCGCGCCCCCGCCAAAGAGGGGTGTGTGAAATGTCGGCAAGGAGGGCCACCAAGATGA	193		
Db	1607	ACTGCCGCGCCCCCGCCAAAGAGGGGTGTGTGAAATGTCGGCAAGGAGGGCCCAAGATGA	1666		



QY 194 AGGACTGCACCGAGCGCCAGGCGCACTTCTTCGCGAGGACCTGCGCTTCCGCCAGGCGCA 253  
Db 1667 AGGACTGCACCGAGCGCCAGGCGCACTTCTTCGCGAGGACCTGCGCTTCCGCCAGGCGCA 1726  
QY 254 AGGCCCCCGAGTTCCTCCAGCGGAGGAACTCGCGCCCAACAGCCCCCAACGCGCGAGCTGC 313  
Db 1727 AGGCCCCCGAGTTCCTCCAGCGGAGGAACTCGCGCCCAACGCCCCCAACGCGCGAGCTGC 1786  
QY 314 AGGTGCGCGGCGACAAACCCCGAGCGAGGCGCGGCGCGAGCGGCGGCACTCGAACT 373  
Db 1787 AGGTGCGCGGCGACAAACCCCGAGCGAGGCGCGGCGCGAGCGGCGGCACTCGAACT 1846  
QY 374 TCCCCAGATCACTCTGTGGCAAGCCCTGTGTGAGCATCAAGGTGGCGCGGCGAGATCA 433  
Db 1847 TCCCCAGATCACTCTGTGGCAAGCCCTGTGTGAGCATCAAGGTGGCGCGGCGAGATCA 1906  
QY 434 AGGAGCGCTGTGTGACACCGCGCGCGGAGACCTGTGTGAGGAGATGAGCTTGC 493  
Db 1907 AGGAGCGCTGTGTGACACCGCGCGCGGAGACCTGTGTGAGGAGATGAGCTTGC 1966  
QY 494 GCAAGTGAAGCCCAAGATGATCGGCGGCGATCGGCGGCTTCATCAAGGTGGCGCGAGTACG 553  
Db 1967 GCAAGTGAAGCCCAAGATGATCGGCGGCGATCGGCGGCTTCATCAAGGTGGCGCGAGTACG 2026  
QY 554 ACCAGATCTGTATCGAGATCTGCGGGAAGAGGCCATCGGCAACCTGCTGATCGGCCCA 613  
Db 2027 ACCAGATCTGTATCGAGATCTGCGGGAAGAGGCCATCGGCAACCTGCTGATCGGCCCA 2086  
QY 614 CCCCCGTAACTCATCGGCGCGCAACGTGTGACCCAGTGGGCTGCACCTGAACTTC 673  
Db 2087 CCCCCGTAACTCATCGGCGCGCAACGTGTGACCCAGTGGGCTGCACCTGAACTTC 2146  
QY 674 CCATCAGGCCCATCGAGACCTGTGCCGTGAAGCTGAAGCCCGGCACTGACGCGCCCAAG 733  
Db 2147 CCATCAGGCCCATCGAGACCTGTGCCGTGAAGCTGAAGCCCGGCACTGACGCGCCCAAG 2206  
QY 734 TGAAGCAGTGGCCCCCTGACCCGAGGAGAGATCAAGCCCTGACCCCACTGTGCGAGGAGA 793  
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Db 2267 TGGAGAAGAGGCGAAGATCAACAGATGGGCGCGGAGAACCCCTACCAACCCCGAGT 2326  
QY 854 TCGCCATCAAGAAAGAGACAGCACCAATGGCGCAAGCTGTGTGACTTCCGCGAGCTGA 913  
Db 2327 TCGCCATCAAGAAAGAGACAGCACCAATGGCGCAAGCTGTGTGACTTCCGCGAGCTGA 2386  
QY 914 ACAAGCGCACCCAGGACTTCTGGGAGGTGCACTGGGCACTCCCAACCCCGCGGCTGA 973  
Db 2387 ACAAGCGCACCCAGGACTTCTGGGAGGTGCACTGGGCACTCCCAACCCCGCGGCTGA 2446  
QY 974 AGAAGAAGAGAGCTGACCGGTGTGAGAGTGGGCGAGCCCTACTTCAAGCGGCGCTGG 1033  
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QY 1034 ACGAGAGTTCGCAAGTACACCGGCTTCACCATCCCGACATCAACAAGAGACCCCG 1093  
Db 2507 ACGAGAGTTCGCAAGTACACCGGCTTCACCATCCCGACATCAACAAGAGACCCCG 2566  
QY 1094 GCATCCGCTACCAAGTACAACTGTGCCCCCAAGGCTGTGAAGGCGAGCCCGAGCATCTTC 1153  
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QY 1154 AGAGAGCATGACCAAGATCTGTGAGCCCTTCGCGCGCGCAACCCCGAGATCTGATCT 1213  
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QY 1214 ACCAGCGCCCTGTGTACGTGGAGAGCACTTGAGATGGCGGCAAGCGCGCAAGATCG 1273  
Db 2687 ACCAGCGCCCTGTGTACGTGGAGAGCACTTGAGATGGCGGCAAGCGCGCAAGATCG 2746  
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Db 2747 AGGACTGCGCAAGACCTGTGCGCTGGGGCTTACCAACCCCGACAAAGAGCACAGA 2806  
QY 1334 AGGAGCCCCCTCTGTGATGGGCTACAGAGCTGACACCCGAAATGGAACCTGAGC 1393  
Db 2807 AGGAGCCCCCTCTGTGATGGGCTACAGAGCTGACACCCGAAATGGAACCTGAGC 2860  
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QY 1454 AGCTGAACCTGGCCAGCCAGATCTTACCCCGCATCAAGGTGGCGCACTGTGCAAGCTGC 1513  
Db 2921 AGCTGAACCTGGCCAGCCAGATCTTACCCCGCATCAAGGTGGCGCACTGTGCAAGCTGC 2980  
QY 1514 TGGCGGCGCCCAAGGCTGTGACCCGACATCTGTGCCCCCTGACCGAGAGAGCGGAGTGAAGC 1573  
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QY 1574 TGGCGGAGAACCGGAGATCTGTGCGGAGCCGTGCAAGGCGGTACTTACGACCCAGCA 1633  
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QY 1634 AGGACTGTGGCCGAGATCTGAGAGAGGCGCAACAGTGAACCTTACAGATCTTACC 1693  
Db 3101 AGGACTGTGGCCGAGATCTGAGAGAGGCGCAACAGTGAACCTTACAGATCTTACC 3160  
QY 1694 AGGAGCCCTCAAGACCTGGAAGACCGGCAAGTACCGCAAGTGGCGGCGGCGGCAACCA 1753  
Db 3161 AGGAGCCCTCAAGACCTGGAAGACCGGCAAGTACCGCAAGTGGCGGCGGCGGCAACCA 3220  
QY 1754 ACGAGTGAAGCACTGACCGAGCGCTGAGAGAGATGCGCATGAGAGCATCTGTACT 1813  
Db 3221 ACGAGTGAAGCACTGACCGAGCGCTGAGAGAGATGCGCATGAGAGCATCTGTACT 3280  
QY 1814 GGGGCAAGACCCCAAGTTCGCGCTGCCATCGAAGAGAGACTTGGAGACTGTGTGA 1873  
Db 3281 GGGGCAAGACCCCAAGTTCGCGCTGCCATCGAAGAGAGACTTGGAGACTGTGTGA 3340  
QY 1874 CCGACTGTGGCAGGACCTGATCCCGAGTGGAGTGTGAACACCCCGGCTGG 1933  
Db 3341 CCGACTGTGGCAGGACCTGATCCCGAGTGGAGTGTGAACACCCCGGCTGG 3400  
QY 1934 TGAAGCTGTGTACCACTGAGAGAGAGCCCATCATCGGCGCGAGACTTCTTACGTGG 1993  
Db 3401 TGAAGCTGTGTACCACTGAGAGAGAGCCCATCATCGGCGCGAGACTTCTTACGTGG 3460  
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QY 2174 TGGGCAATCAACAGGCGGAGCGGAGAGGCGGAGCGAGCTGTGAACAGATCATCG 2233  
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QY 2294 GCGGCAACGAGCAGATGACAGCTGTGAGACAGGCGATCGCAAGGTGCTTCTGG 2353  
Db 3761 GCGGCAACGAGCAGATGACAGCTGTGAGACAGGCGATCGCAAGGTGCTTCTGG 3820  
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RESULT 5  
US-10-190-435-10  
; Sequence 10, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEGERDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBERG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; FILE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: P18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: Patentin ver. 2.0  
; SEQ ID NO 10  
; LENGTH: 3930  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: GagComplPoiImurAtt\_C  
US-10-190-435-10

Query Match 98.0%; Score 2414; DB 12; Length 3930;  
Best Local Similarity 99.5%; Pred. No. 0;  
Matches 2433; Conservative 0; Mismatches 5; Indels 6; Gaps 1;

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QY 74 AGGCGCCCAAGCGCATCATCAAGTGTCTCACTGCGGCAAGAGGGGCCACATCGCCGCA 133  
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QY 374 TCCCCCAGATCACCTGTGTGCGAGCGCCCGCTTGTGTGAGCATCAAGGTGGCGCGCAGATCA 433  
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Db 1907 AGGAGGCCCTGTGGAGCTCCGCGCGCGGACGACACCGTGTGGAGGAGATGAGCCTGCCCG 1966  
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Db 2087 CCCCCGTGAACATCATCGCGCGCAACATGTGATCCAGCTGGGTGACACCTTGAACCTTCC 2146  
QY 674 CCATCAGCCCCATCGAGACCGCTGAGCTGAAGCTGAAGCCCGCATGGAGCGGCCCAAGG 733  
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Db 2687 ACCAGCCCCCTGTACGTGGCGCAGCAGCTGAGATCGGCGCAGCAGCGCGCAAGATCG 2746  
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Db 3101 AGGACCTGTGGCCGAGATCCAGAAAGAGGCGCAGACCAGTGAAGCTTACCAATCTAC 3160
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Db 3101 AGGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCCAAGATGTGGCAACCGCCACACA 3220
QY 1754 ACGAGGTGAAGAGCTGAACCGAGGCGGTGACAGAGATGCCATGAGAGCATCTGATCT 1813
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QY 1814 GGGGCAAGACCCCAAGTTCGCGCTGCTCCATTCAGAGAAGACCTGAGAGACCTGTGTGA 1873
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Db 3341 CGGACTACTGGAGGCGCACTGTGATCCCGAGTGGGAGATTTGTGACACCCCCCCCCCTGG 3400
QY 1934 TGAAGCTGTGTATCCAGCTGAGAGAGAGCCCATCTGCGCGCCGAGACCTTCTTACCTGG 1993
Db 3401 TGAAGCTGTGTATCCAGCTGAGAGAGAGCCCATCTGCGCGCCGAGACCTTCTTACCTGG 3460
QY 1994 ACGGCGCCGCGCAACCGCGAGACCAAGATGTGGTAAGCGGCTACTGACCTGACCGAGGCGC 2053
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QY 2054 GGCAGAGATCGTGAAGCTGACCGAGACCAACCAAGAGACCGAGCTGACAGGCGCATCC 2113
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QY 2294 GCGGCAACGAGCATGCAAGACTGTGAGCAGAGGCAATCCGCAAGGTCTCTTCTCG 2353
Db 3761 GCGGCAACGAGCATGCAAGACTGTGAGCAGAGGCAATCCGCAAGGTCTCTTCTCG 3820
QY 2354 ACGGATGATGGGCGGATCTGATCTACAGTACATGAGACGACTGTACCGGCGAGCG 2413
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QY 2414 GCGGCGCTGAGATCGATTAAAGCTTCCCGGCGCTAGACCGGT 2457
Db 3881 GCGGCGCTGAGATCGATTAAAGCTTCCCGGCGCTAGACCGGT 3924

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RESULT 6
US-10-190-435-11
; Sequence 11, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190.435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11

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; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagComp]Polmutina_C
US-10-190-435-11

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Query Match 98.0%; Score 2414; DB 12; Length 3930;
Best Local Similarity 99.5%; Pred. No. 0;
Matches 2433; Conservative 0; Mismatches 5; Indels 6; Gaps 1;

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QY 194 AGGACTGACCGAGCGCCAGGCCAATTCTTCCGCGAGACCTTGCCCTTCCAGGCA 253
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QY 494 GCAAGTGAAGCCCAAGATATCGCGCGCATCGCGGCTTATCAAGTGTGCCAGTACG 553
Db 1967 GCAAGTGAAGCCCAAGATATCGCGCGCATCGCGGCTTATCAAGTGTGCCAGTACG 2026
QY 554 ACCGATCTGATGATGATCTGCGGCAAGAGGCAATCGGCACTGTGTCTGATCGGCCA 613
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QY 614 CCCCCGTGACATCATGCGCGCGCAACATGTGACCCGAGCTGGGTGACCCCTGA 673
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QY 794 TGAAGAGAGGAGGCAATCAACCAAGTGGGCGCGGAGACCCCTTACCAACCCCGTGT 853
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Db	2981	AGGCGCGGAGTTCCCCAGCGAGCAACCGCGCCAAAGCCGCCACAGCGCGAGCTGC	3040
QY	314	AGGTGCGCGGCGACACCCCGCGACGAGGCCGGCGCCAGCGCCAGGCACTTGAACCT	373
Db	3041	AGGTGCGCGGCGACACCCCGCGACGAGGCCGGCGCCAGCGCCAGGCACTTGAACCT	3100
QY	374	TCCCCCAAGTACACCTGATGAGAGCGGCCCCCTGATGAGATCAAGTGGGCGCCAGATCA	433
Db	3101	TCCCCCAAGTACACCTGATGAGAGCGGCCCCCTGATGAGATCAAGTGGGCGCCAGATCA	3160
QY	434	AGGAGGCGCTGCTGAGACACCGCGCGCGACACACCGTCTGAGAGAGTGAAGCTTGC	493
Db	3151	AGGAGGCGCTGCTGAGACACCGCGCGCGACACACCGTCTGAGAGAGTGAAGCTTGC	3220
QY	494	GCAAGTGAAGGCCCAAGTGAATCGAGGCGATCGGCGCTTCAATGAAGTGGCGCAGTAC	553
Db	3221	GCAAGTGAAGGCCCAAGTGAATCGAGGCGCGATCGGCGCTTCAATGAAGTGGCGCAGTAC	3280
QY	554	ACCAATCCTGATCGAGATCTGCGGCGCAAGAAAGGCCATGAGACCGTGTGATCGGCGCA	613
Db	3281	ACCAATCCTGATCGAGATCTGCGGCGCAAGAAAGGCCATGAGACCGTGTGATCGGCGCA	3340
QY	614	CCCCCGTGAACATCATCGGCGCGCAACATGCTGACCCAGCTGGGCTGCAACCTTGAACCTCC	673
Db	3341	CCCCCGTGAACATCATCGGCGCGCAACATGCTGACCCAGCTGGGCTGCAACCTTGAACCTCC	3400
QY	674	CCATTAAGCCCATGAGACCGTGCCTCGTGAAGCTGAAAGCCCGGATGAGACGCGCCCAAG	733
Db	3401	CCATTAAGCCCATGAGACCGTGCCTCGTGAAGCTGAAAGCCCGGATGAGACGCGCCCAAG	3460
QY	734	TGAAGCACTGGCCCCCTGACCGAGGAGAAAGATCAAGGCGCTGACCGGCATCTGAGAGAGA	793
Db	3461	TGAAGCACTGGCCCCCTGACCGAGGAGAAAGATCAAGGCGCTGACCGGCATCTGAGAGAGA	3520
QY	794	TGAGAAAGAGAGGCGAAGATCAACAAATCGGCGCCCGAGAACCTCTTACAAGACCCCGCTGT	853
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Db	3641	ACAAGCGCACCCAGGACTTTGGGAGGGTGCAGCTGGGGATCCCCACCCCGCGGCGCTGA	3700
QY	974	AGAAAGAAAGAGCGTGAACCGTGTGAGCTGTGGCGAGCGCTACTTACAGCGTCCCTTG	1033
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QY	1034	ACGAGGACTTCCGAAAGTACCGCGCTTCAACATCCCAAGATCAACAGAGACCCCG	1093
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QY	1094	GCAATCCGCTACCAATACAGTCTGTGAGCGCTTCCGCGCGCGCAACCCCGAGATCGTATCT	1153
Db	3821	GCAATCCGCTACCAATACAGTCTGTGAGCGCTTCCGCGCGCGCAACCCCGAGATCGTATCT	3880
QY	1154	AGAGCAGCATACCAAGATCTGTGAGCGCTTCCGCGCGCGCAACCCCGAGATCGTATCT	1213
Db	3881	AGAGCAGCATACCAAGATCTGTGAGCGCTTCCGCGCGCGCAACCCCGAGATCGTATCT	3940
QY	1214	ACCAAGGCCCCCTGTACGTGGGCGAGCACTGAGATCGGCGACACCGCGCCAAAGTGC	1273
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QY	1274	AGGAGCTGCGCAACACCTGTGTGGCTGGGGCTTCAACACCCCGAGAAAGACCAAG	1333
Db	4001	AGGAGCTGCGCAACACCTGTGTGGCTGGGGCTTCAACACCCCGAGAAAGACCAAG	4060

QY	1334	AGGAGCCCCCTTCTCTGTGATGGGCTACGAGCTGCACCCCGACAAGTGAACCTGTGAGC	1393
Db	4061	AGGAGCCCCCTTCTCTGCCCAT-----CGAGCTGCACCCCGACAAGTGAACCTGTGAGC	4114
QY	1394	CCATCGAGCTGCCCGAGAGAGAGAGAGTGAACCTGTGAACGACATCCAGAAAGCTGTGGGCA	1453
Db	4115	CCATCGAGCTGCCCGAGAGAGAGAGTGAACCTGTGAACGACATCCAGAAAGCTGTGGGCA	4174
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QY	1574	TGGCGGAGAACCCCGAGAGATCTGTCCGGAGACCTGTGACGGCGTGTACTGACCCAGCA	1633
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QY	2054	GGCAGAAGATCTGTAGCTGTGACCTGAGACCAACCAACAGAGAATCGAGCTGAGGCCATCC	2113
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; Sequence 14, Application US/10190435
; Publication No. US2003014348A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEHDE, Jan
; APPLICANT: BARRETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190/435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: Patent In Ver. 2.0
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; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutAtc_C
US-10-190-435-14

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Query Match 96.7%; Score 2382; DB 12; Length 3537;
Best Local Similarity 98.7%; Pred. No. 0;
Matches 2413; Conservative 0; Mismatches 25; Indels 6; Gaps 1;

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 DB 3308 AGCAGCTCATCAAGAGGAGAGGCTGTACCTGAGCTGGTGCCTCCGCCACAGGCGCATCG 3367  
 QY 2294 CGGGCAACGAGCAGATCGACAAAGCTGTGAGAGAGGCGCATCGCAAGGTGCTTCTTGG 2353  
 DB 3368 CGGGCAACGAGCAGATCGACAAAGCTGTGAGAGGCGCATCGCAAGGTGCTTCTTGG 3427  
 QY 2354 ACGGCATCGATGGCGGCATCGTGTACTACAGTACATGAGACCTGTAGTGGCAGCG 2413  
 DB 3428 ACGGCATCGATGGCGGCATCGTGTACTACAGTACATGAGACCTGTAGTGGCAGCG 3487  
 QY 2414 GCGGCCCTTAGGATCGATTAAAGCTTCCCGGGGCTAGCACCGGT 2457  
 DB 3488 GCGGCCCTTAGGATCGATTAAAGCTTCCCGGGGCTAGCACCGGT 3531

RESULT 10  
 US-10-190-435-15  
 ; Sequence 15, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEHRDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYPEPTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
 ; FILE REFERENCE: P/18133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 15  
 ; LENGTH: 3537  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutIna\_C  
 US-10-190-435-15

Query Match 96.7%; Score 2382; DB 12; Length 3537;  
 Best Local Similarity 98.7%; Pred. No. 0;  
 Matches 2413; Conservative 0; Mismatches 25; Indels 6; Gaps 1;  
 QY 14 TGGCGAGGCGCATGAGCCAGGCGCACCGGCGCAACATCTGTGATGAGCGCAGCACTTCA 73  
 DB 1094 TGGCGAGGCGCATGAGCCAGGCGCAACCGAGCGTGTGATGAGAGAGCAACTTTAAAA 1153  
 QY 74 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGAAGGAGGCGCACATCGCCCGCA 133  
 DB 1154 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGAGAGGCGCCACATCGCCCGCA 1213  
 QY 134 ACTGCGCGGCCCCCGCAGAGAGGCTGTGTGAAGTGGCGCAAGAGGCGCCACGATCA 193  
 DB 1214 ACTGCGCGGCCCCCGCAGAGAGGCTGTGTGAAGTGGCGCAAGAGGCGCCACGATCA 1273  
 QY 194 AGGACTGCACCGAGCGCCAGGCGCAACTTCTTCGCGAGGACCTTGGCTTCCCGCAGGCA 253  
 DB 1274 AGGACTGCACCGAGCGCCAGGCGCAACTTCTTCGCGAGGACCTTGGCTTCCCGCAGGCA 1333

Db	2414	AGGACCCCCCTTCTCTGCCCATT-----CGAGCTGCACCCCGGCAAGTGACCGCTGCAGC	2457
QY	1394	CCATGAGACTGCCGAGAGAGAGAGCTGGACCTGGAAACGATCCAGAACGCTGGTGGCA	1453
Db	2468	CCATGAGACTGCCGAGAGAGAGAGCTGGACCTGGAAACGATCCAGAACGCTGGTGGCA	2527
QY	1454	AGCTGAATGGGCGACGACGATCTACCCCGGCATCAAGTGGCGCAGCTGGCAGCTGC	1513
Db	2528	AGCTGAATGGGCGACGACGATCTACCCCGGCATCAAGTGGCGCAGCTGGCAGCTGC	2587
QY	1514	TGCGGGGGCCAAAGCCCTTGAACCGACATCTGTCCCTTGACCGAGAGGGCCGAGCTGAGC	1573
Db	2588	TGCGGGGGCCAAAGCCCTTGAACCGACATCTGTCCCTTGACCGAGAGGGCCGAGCTGAGC	2647
QY	1574	TGCGCGAAGAACGCGAGATCTGTGCGAGGCCCTTGACCGGCGTGTACTACAGACCCGACGA	1633
Db	2648	TGCGCGAAGAACCGGAGATCTGTGCGAGGCCCTTGACCGGCGTGTACTACAGACCCGACGA	2707
QY	1634	AGGACCTGTGTGGCCGAGATCTCAGAGACGAGGCCACGACCAAGTGAACCTACCAATCTAAC	1693
Db	2708	AGGACCTGTGTGGCCGAGATCTCAGAGAGGAGGCCACGACCAAGTGAACCTACCAATCTAAC	2767
QY	1694	AGGAGCCCTTCAAGAACCTTGAAGACCGGCAAGTACGACCAAGATGGGACCGGCCACACCA	1753
Db	2768	AGGAGCCCTTCAAGAACCTTGAAGACCGGCAAGTACGACCAAGATGGGACCGGCCACACCA	2827
QY	1754	ACGACGTGAAGCAGCTGACCGAGGCCCTGCGAAGATTCGCCATGAGAGCATCTGTACTT	1813
Db	2828	ACGACGTGAAGCAGCTGACCGAGGCCCTGCGAAGATTCGCCATGAGAGCATCTGTACTT	2887
QY	1814	GGGGGAGAGACCCCAAGTTCGCGCTGCGCCATCCAGAGAGAGACCTGGGAGACCTGTGGGA	1873
Db	2888	GGGGGAGAGACCCCAAGTTCGCGCTGCGCCATCCAGAGAGAGACCTGGGAGACCTGTGGGA	2947
QY	1874	CCGACTACTGCGAAGGCCACCTGATTCGCCAGTGGGAGTTCTGTGAACACCCGCCCTCTGG	1933
Db	2948	CCGACTACTGCGAAGGCCACCTGATTCGCCAGTGGGAGTTCTGTGAACACCCGCCCTCTGG	3007
QY	1934	TGAAGCTGTGTGTACCACTGTGAGAGAGAGGCCATCATCGGCGCCGAAACCTTCTACGTGG	1993
Db	3008	TGAAGCTGTGTGTACCACTGTGAGAGAGAGGCCATCATCGGCGCCGAAACCTTCTACGTGG	3067
QY	1994	ACGGCGCGCGCAACCGCGAGACCAAGATTCGCGAAGCGCGGTATCGTACCGACCGCGGGCC	2053
Db	3068	ACGGCGCGCGCAACCGCGAGACCAAGATTCGCGAAGCGCGGTATCGTACCGACCGCGGGCC	3127
QY	2054	GGCGAAGATGTGTAGCTTGAACGAGACACCAACCAAGAACCCGAGCTGAGGCGCATTC	2113
Db	3128	GGCGAAGATGTGTAGCTTGAACGAGACACCAACCAAGAACCCGAGCTGAGGCGCATTC	3187
QY	2114	AGCTGGGCCCTTGCAGAGACAGCGGCGAGCGAGGTGAACATCGGACCGGACGACGATGACGCC	2173
Db	3188	AGCTGGGCCCTTGCAGAGACAGCGGCGAGCGAGGTGAACATCGGACCGGACGACGATGACGCC	3247
QY	2174	TGGGCATTCATCAGAGGCCCAAGCCCGACAAAGACGAGACGAGCGACTGGTAAACCAATCTATCG	2233
Db	3248	TGGGCATTCATCAGAGGCCCAAGCCCGACAAAGACGAGACGAGCGACTGGTAAACCAATCTATCG	3307
QY	2234	AGCAGCTGATTCAGAGAGAGAAAGTGTACTGTAGCTGGGTGCCGCCCAAGAGGCAATCG	2293
Db	3308	AGCAGCTGATTCAGAGAGAGAAAGTGTACTGTAGCTGGGTGCCGCCCAAGAGGCAATCG	3367
QY	2294	GCGGCAACGAGCAGATGACAAAGCTGGTGAAGAGGCGATCCGCAAGGTCTGTCTCTGG	2353
Db	3368	GCGGCAACGAGCAGATGACAAAGCTGGTGAAGAGGCGATCCGCAAGGTCTGTCTCTGG	3427
QY	2354	ACGCGCATTCGATGGCGGCTGTGTATCTACAGTACATGACGACCTGTACGTGGGCGAGC	2413
Db	3428	ACGCGCATTCGATGGCGGCTGTGTATCTACAGTACATGACGACCTGTACGTGGGCGAGC	3487
QY	2414	GCGGCGCTAGATTCGATTAAGACCTTCCGCGGCGCTGACCCGAT 2457	



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Db      3161 AGGAGCCCTTCAAGAACCTGAAAGACCGGCAAGTACGCAAGTACGCAAGCCGACACCA 3220
Qy      1754 ACGAGGTGAGCAGTGAACCGGCGCGTGCAGAAATGCCATGAGAGCATCGATCT 1813
Db      3221 ACGAGGTGAGCAGTGAACCGGCGCGTGCAGAAATGCCATGAGAGCATCGATCT 3280
Qy      1814 GGGGCAAGACCCCAAGTTCGCGCTGCCATCAGAAAGAGACCTGGAGACTGGTGA 1873
Db      3281 GGGGCAAGACCCCAAGTTCGCGCTGCCATCAGAAAGAGACCTGGAGACTGGTGA 3340
Qy      1874 CCGACTACTGGCAGGCGCACCTGGATCCCGAGTGGGAGTTGGTGAACCCCCCTGG 1933
Db      3341 CCGACTACTGGCAGGCGCACCTGGATCCCGAGTGGGAGTTGGTGAACCCCCCTGG 3400
Qy      1934 TGAAGCTGTGTACAGCGTGGAGAGAGAGCCCATATGGGCGCGAGACTTCTACGTTG 1993
Db      3401 TGAAGCTGTGTACAGCGTGGAGAGAGAGCCCATATGGGCGCGAGACTTCTACGTTG 3460
Qy      1994 ACGGCGCCGCCAACCGCGAGACCAAGATCGGCAAGCGCGCTACGTGACCGACCGGAGCC 2053
Db      3461 ACGGCGCCGCCAACCGCGAGACCAAGATCGGCAAGCGCGCTACGTGACCGACCGGAGCC 3520
Qy      2054 GCGAGAAATCTGTAGCTTGAACCGAGACCAACCAAGAACCGAGCTGCAAGGCTATCC 2113
Db      3521 GCGAGAAATCTGTAGCTTGAACCGAGACCAACCAAGAACCGAGCTGCAAGGCTATCC 3580
Qy      2114 AGCTGGCCCTGTGAGAGCAGCGCAGCGAGGTGAACATGTGACCGACAGCGAGTACGCGCC 2173
Db      3581 AGCTGGCCCTGTGAGAGCAGCGCAGCGAGGTGAACATGTGACCGACAGCGAGTACGCGCC 3640
Qy      2174 TGGGATCATCATCAGGCGCCAGCCCGAACAGAGCGAGCGAGCTGTGAAACCATCATCG 2233
Db      3641 TGGGATCATCATCAGGCGCCAGCCCGAACAGAGCGAGCGAGCTGTGAAACCATCATCG 3700
Qy      2234 AGCAGCTGATCAAGAGAGAGAGAGTGTACCTGAGCTGGGTGCCGCCCAAGAGGCTATCG 2293
Db      3701 AGCAGCTGATCAAGAGAGAGAGAGTGTACCTGAGCTGGGTGCCGCCCAAGAGGCTATCG 3760
Qy      2294 GCGGCAACGAGCAGATCGACAAAGCTGTAGAGAAAGGATCGGCAAGGTGCTGTTCTCG 2353
Db      3761 GCGGCAACGAGCAGATCGACAAAGCTGTAGAGAAAGGATCGGCAAGGTGCTGTTCTCG 3820
Qy      2354 ACGGCATGATGCGCGCATCGTATCTACAGTACATGAGACGACTGTACGTGGCAGCG 2413
Db      3821 ACGGCATGATGCGCGCATCGTATCTACAGTACATGAGACGACTGTACGTGGCAGCG 3880
Qy      2414 GCGGCGCTAGG 2424
Db      3881 GCGGCGCTAGG 3891

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RESULT 12
US-10-190-435-48
; Sequence 48, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN KENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: P1813.003 / 2302-1813
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 48
; LENGTH: 3607
; TYPE: DNA
; ORGANISM: Artificial Sequence

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; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2PolRevNef.opt_C
US-10-190-435-48
Query Match      94.3%; Score 2322.6; DB 12; Length 3607;
Best Local Similarity 97.9%; Pred. No. 0;
Matches 2365; Conservative 0; Mismatches 44; Indels 6; Gaps 1;

Qy      1 GTGAGGCGCAACATGGCGCGAGGCGCATGAGCGAGGCGCAACCGCGCAACATCTGATGACG 60
Db      1 GTGAGGCGCAACATGGCGCGAGGCGCATGAGCGAGGCGCAACCGCGCAACATCTGATGACG 60
Qy      61 CGCAGCACTTCAAGGCGCCCAAGCGCATCATCAAGTCTTCAACTGCGCAAGAGAGGCG 120
Db      61 CGCAGCACTTCAAGGCGCCCAAGCGCATCATCAAGTCTTCAACTGCGCAAGAGAGGCG 120
Qy      121 CACATGCGCCGCAACTGCGCGGCGCCCGCGCAAGAGGCGCTGGAAGTGGCGCAAGAG 180
Db      121 CACATGCGCCGCAACTGCGCGGCGCCCGCGCAAGAGGCGCTGGAAGTGGCGCAAGAG 180
Qy      181 GGGCAGCAGATGAAGGAGCTGCAACGAGCGCAAGGCGCAACTTTCGCGAGAGACTGGCC 240
Db      181 GGGCAGCAGATGAAGGAGCTGCAACGAGCGCAAGGCGCAACTTTCGCGAGAGACTGGCC 240
Qy      241 TTCCCGCAGGCAAGGCGCGGAGTTCCCAAGCAGAGAAACCGCGCAACAGGCCCAAC 300
Db      241 TTCCCGCAGGCAAGGCGCGGAGTTCCCAAGCAGAGAAACCGCGCAACAGGCCCAAC 300
Qy      301 AGCCGCGAGCTGCAAGTGGCGGCGGAGCAACCCCGCAGCGAGGCGCGCGCGCGCGAG 360
Db      301 AGCCGCGAGCTGCAAGTGGCGGCGGAGCAACCCCGCAGCGAGGCGCGCGCGCGCGAG 360
Qy      361 GGCACCTGTAACTTCCCCAGATCACTGTGGAGAGCGCCCGCTGTGAGAGATCAAGGTG 420
Db      361 GGCACCTGTAACTTCCCCAGATCACTGTGGAGAGCGCCCGCTGTGAGAGATCAAGGTG 420
Qy      421 GGGCGCAAGATCAAGAGGCGCTGTGAGACCGCGCGCGCAACACGATGCTTGAGAGAG 480
Db      421 GGGCGCAAGATCAAGAGGCGCTGTGAGACCGCGCGCGCAACACGATGCTTGAGAGAG 480
Qy      481 ATGAGCTTGGCGCGCAAGTGGAGAGCCCAAGTATGCGCGGCGATCGCGGCTTATCAAG 540
Db      481 ATGAGCTTGGCGCGCAAGTGGAGAGCCCAAGTATGCGCGGCGATCGCGGCTTATCAAG 540
Qy      541 GTGGCGCAGTACGACCGAGTCTGATCGAATCTGCGCGCAAGAGCGCATCGGCAACGCG 600
Db      541 GTGGCGCAGTACGACCGAGTCTGATCGAATCTGCGCGCAAGAGCGCATCGGCAACGCG 600
Qy      601 CTGATGCGCCCAACCCCGTGAAATCATGCGCGCAACATGCTGACCCAGCTGGGCTGC 660
Db      601 CTGATGCGCCCAACCCCGTGAAATCATGCGCGCAACATGCTGACCCAGCTGGGCTGC 660
Qy      661 ACCCTGAACCTTCCCAATCAAGCCCATGGAAGAGCGTGGCGTGAAGCTGGAAGCCCGGATG 720
Db      661 ACCCTGAACCTTCCCAATCAAGCCCATGGAAGAGCGTGGCGTGAAGCTGGAAGCCCGGATG 720
Qy      721 GACGCGCCCAAGTGAAGCAGTGGCGCCCTGACGAGAGAGAGATCAAGGCGCTGACGCGC 780
Db      721 GACGCGCCCAAGTGAAGCAGTGGCGCCCTGACGAGAGAGAGATCAAGGCGCTGACGCGC 780
Qy      781 ATCTGAGAGAGATGAGAGAGAGAGGCGAGATGACCAAGATGCGGCCCGCGAACCCTTAC 840
Db      781 ATCTGAGAGAGATGAGAGAGAGAGGCGAGATGACCAAGATGCGGCCCGCGAACCCTTAC 840
Qy      841 AACACCCCGGTGTCGCAACCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 900
Db      841 AACACCCCGGTGTCGCAACCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 900
Qy      901 TTCCGAGAGTGAACAGCGCAACAGAGATTCTGAGAGGTGACGCTGGCATGCCCGAC 960
Db      901 TTCCGAGAGTGAACAGCGCAACAGAGATTCTGAGAGGTGACGCTGGCATGCCCGAC 960
Qy      961 CCGCGCGGCTGAAGAGAGAGAGAGAGCGTGTGAGCGTGGCGAGCGCTACTTC 1020

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Db 961 ||||| CCGCCGCGCTGAAGAAGAAAGAGCGTGACCGCTGTGGACGTGGGGCGACCTACTTC 1020  
QY 1021 AGCGTGCCTTGAAGAGAGACTTCGGAAGTACACCGCTTACACCTCCCGAGCATCAAC 1080  
Db 1021 AGCGTGCCTTGAAGAGAGACTTCGGAAGTACACCGCTTACACCTCCCGAGCATCAAC 1080  
QY 1081 AACAGAACCCCGCGCATCCGCTACCACTACCACTGTGCCCCAGGCGCTGAGGGGAGC 1140  
Db 1081 AACAGAACCCCGCGCATCCGCTACCACTACCACTGTGCCCCAGGCGCTGAGGGGAGC 1140  
QY 1141 CCGAGCATCTTCAGAGCAGCATGACCAAGATCTCGAGCGCTTCGCGCGCCGCAACCCC 1200  
Db 1141 CCGAGCATCTTCAGAGCAGCATGACCAAGATCTCGAGCGCTTCGCGCGCCGCAACCCC 1200  
QY 1201 GAGATCGTGATCTACAGGCGCCCTCTGAGTGGGCGAGCGACCTGGAGATCGGCGAGC 1260  
Db 1201 GAGATCGTGATCTACAGGCGCCCTCTGAGTGGGCGAGCGACCTGGAGATCGGCGAGC 1260  
QY 1261 CGCGCCAAAGATCGAGGAGCTGCGCAAGCAGCTGTGCGCTGGGCTTCACCAACCCCGAC 1320  
Db 1261 CGCGCCAAAGATCGAGGAGCTGCGCAAGCAGCTGTGCGCTGGGCTTCACCAACCCCGAC 1320  
QY 1321 AAGAAGCACAGAGAGCGCCCTTCTGTGGATGGGCTACGAGCTGCACCCGCAAG 1380  
Db 1321 AAGAAGCACAGAGAGCGCCCTTCTGTGGATGGGCTACGAGCTGCACCCGCAAG 1380  
QY 1381 TGACCGCTGAGCGCCATCGAGCTGCCGAGAGAGAGAGCTGGACCTGGAAGCAGCATCCAG 1440  
Db 1375 TGACCGCTGAGCGCCATCGAGCTGCCGAGAGAGAGAGCTGGACCTGGAAGCAGCATCCAG 1434  
QY 1441 AAGCTGTGGGCAAGCTGAATGGGCGAGCGACATCTACCCCGCATCAAGGTGGCGCAG 1500  
Db 1435 AAGCTGTGGGCAAGCTGAATGGGCGAGCGACATCTACCCCGCATCAAGGTGGCGCAG 1494  
QY 1501 CTGTGCAAGCTGTGCGCGCGCGCAAGCGCTGACCGACATCTGTGCGCTTGAACCGAGGAG 1560  
Db 1495 CTGTGCAAGCTGTGCGCGCGCGCAAGCGCTGACCGACATCTGTGCGCTTGAACCGAGGAG 1554  
QY 1561 GCGGAGCTGAGCTGGCGGAGACCGGAGATCTGCGCGAGCCGCTGCGAGCGGTGTAC 1620  
Db 1555 GCGGAGCTGAGCTGGCGGAGACCGGAGATCTGCGCGAGCCGCTGCGAGCGGTGTAC 1614  
QY 1621 TAGACCCCAAGGAGCTGTGGGCGAGATCCAGAAAGCGGCGACGACCAAGTGAAC 1680  
Db 1615 TAGACCCCAAGGAGCTGTGGGCGAGATCCAGAAAGCGGCGACGACCAAGTGAAC 1674  
QY 1681 TACAGATCTACAGGAGCGCTTCAAGAACTTGAAGACCGGCAAGTACGCAAGATGCGC 1740  
Db 1675 TACAGATCTACAGGAGCGCTTCAAGAACTTGAAGACCGGCAAGTACGCAAGATGCGC 1734  
QY 1741 ACCGCGCACACCAAGCAGCTGAAGAGCTGACCGGCGCGTGCAGAGATCGCGCTGGAG 1800  
Db 1735 ACCGCGCACACCAAGCAGCTGAAGAGCTGACCGGCGCGTGCAGAGATCGCGCTGGAG 1794  
QY 1801 AGCATCGTATCTGGGCGAGACCCCAAGTCTCGGCTGCCATCCAGAAAGGAGACTCG 1860  
Db 1795 AGCATCGTATCTGGGCGAGACCCCAAGTCTCGGCTGCCATCCAGAAAGGAGACTCG 1854  
QY 1861 GAGACCTGTGAGCCGACTACTGGAGGCCACTGTGATCCCGAGTGGGAGTTCGTGAAC 1920  
Db 1855 GAGACCTGTGAGCCGACTACTGGAGGCCACTGTGATCCCGAGTGGGAGTTCGTGAAC 1914  
QY 1921 ACCCGCCCTGTGAGCTGTGATCCAGTGGAGAGAGAGCCCATCATCGCGCGCGAG 1980  
Db 1915 ACCCGCCCTGTGAGCTGTGATCCAGTGGAGAGAGAGCCCATCATCGCGCGCGAG 1974  
QY 1981 ACCTTCTACGTGACCGCGCGCAACCGGAGACCAAGATCGGCGAGCGCGCTACGTG 2040  
Db 1975 ACCTTCTACGTGACCGCGCGCAACCGGAGACCAAGATCGGCGAGCGCGCTACGTG 2034  
QY 2041 ACCGACCGGCGCGGAGAGATCGTGAAGCTGACCGAGACCAACCAAGAGACCGAG 2100

Db 2035 ACCGACCGGCGCGGAGAGATCGTGAAGCTGACCGAGACCAACAGAGACCGAG 2094  
QY 2101 CTGAGGCCATCAGCTGGCCCTGCGAGGACAGCGGCGAGCGAGTGAACATCGTGAACCGAC 2160  
Db 2095 CTGAGGCCATCAGCTGGCCCTGCGAGGACAGCGGCGAGCGAGTGAACATCGTGAACCGAC 2154  
QY 2161 AGCAGTACGCCCTGGGCGATCATCCAGGCCCGCGCGAGCGGAGCGAGCTGGT 2220  
Db 2155 AGCAGTACGCCCTGGGCGATCATCCAGGCCCGCGCGAGCGGAGCGAGCTGGT 2214  
QY 2221 AACAGATCATCAGCAGCTGATCAAGAGGAGAAAGGTGTACCTGAGCTGGGTGCCCGCC 2280  
Db 2215 AACAGATCATCAGCAGCTGATCAAGAGGAGAAAGGTGTACCTGAGCTGGGTGCCCGCC 2274  
QY 2281 CACAAGGGATCGCGCGGCAACGAGCAGATCGAAGCTGTGAGCAAGGCGATCCGCAAG 2340  
Db 2275 CACAAGGGATCGCGCGGCAACGAGCAGATCGAAGCTGTGAGCAAGGCGATCCGCAAG 2334  
QY 2341 GTCTGTCTCTGACGCGCATCGATGCGGCGCATCTGATCTACCAAGTACATGGAGCGACTG 2400  
Db 2335 GTCTGTGAATTCAGSCCGCTGGACCCCACTGGAGCCCTTGAACCAACCCCGGAGCCAG 2394  
QY 2401 TACGTGGGCGAGCGC 2415  
Db 2395 CCAAGACCGCGGC 2409

RESULT 13  
US-10-190-435-47  
; Sequence 47, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEDEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; FILE REFERENCE: PP18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 47  
; LENGTH: 3624  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:  
; OTHER INFORMATION: p2PolRevNef.opt.native\_C  
US-10-190-435-47

Query Match 94.3%; Score 2322.6; DB 12; Length 3624;  
Best Local Similarity 97.9%; Pred. No. 0;  
Matches 2365; Conservative 0; Mismatches 44; Indels 6; Gaps 1;  
QY 7 GCCACCATGGCGAGCGCATGAGCGGCCACGAGGCCCAACATCTGTATGAGCGCAGC 66  
Db 1 GCCACCATGGCGAGCGCATGAGCGGCCACGAGGCCCAACATCTGTATGAGCGCAGC 60  
QY 67 AACTTCAGGGGCCCCAAGCGCATCATCAGTCTTCACTGGCGAGGAGGCGCCACATC 126  
Db 61 AACTTCAGGGGCCCCAAGCGCATCATCAGTCTTCACTGGCGAGGAGGCGCCACATC 120  
QY 127 GCGCGCAACTGCG 186  
Db 121 GCGCGCAACTGCG 180  
QY 187 CAGATGAAGGACTGACCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 246  
Db 181 CAGATGAAGGACTGACCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 240

QY 247 CAGGCAAGGCCCGGAGTTCCCGACGAGCAAGAACCGCGCCACACAGCCCGACCGCCG 306  
 Db 241 CAGGCAAGGCCCGGAGTTCCCGACGAGCAAGAACCGCGCCACACAGCCCGACCGCCG 300  
 QY 307 GAGCTGCAAGTGCCTGCGGCAACACCCCGCAGCGAGGCGCGGCGCGAGCGCGAGCGCAC 366  
 Db 301 GAGCTGCAAGTGCCTGCGGCAACACCCCGCAGCGAGGCGCGGCGCGAGCGCGCAC 360  
 QY 367 CTGAACCTTCCCGCAGATCACTCTGAGGAGCGCGCCCTGTGTAGATCAAGGTGGGCGGC 426  
 Db 361 CTGAACCTTCCCGCAGATCACTCTGAGGAGCGCGCCCTGTGTAGATCAAGGTGGGCGGC 420  
 QY 427 CAGATCAAGAGGCCCTGCTGCAACAACCGCGCCACGACACCTGTCTGAGAGATGAGC 486  
 Db 421 CAGATCAAGAGGCCCTGCTGCAACAACCGCGCCACGACACCTGTCTGAGAGATGAGC 480  
 QY 487 CTGCGCCGCAAGTGAAGGCCCAAGTGAATCGCGGCAATCGCGGCTTATCAAGGTGCGC 546  
 Db 481 CTGCGCCGCAAGTGAAGGCCCAAGTGAATCGCGGCAATCGCGGCTTATCAAGGTGCGC 540  
 QY 547 CAGTACGACAGATCTGTATCGAGATCTGCGGCAAGAGGCGCATCGGACCGGTGCTATC 606  
 Db 541 CAGTACGACAGATCTGTATCGAGATCTGCGGCAAGAGGCGCATCGGACCGGTGCTATC 600  
 QY 607 GGGCCACCCCGTGGAATCATCATCGGCGCAACATGCTGACCCAGCTGGGCTGCAACCTG 666  
 Db 601 GGGCCACCCCGTGGAATCATCATCGGCGCAACATGCTGACCCAGCTGGGCTGCAACCTG 660  
 QY 667 AACTTCCCATCAGCCCATGAGACCGGTGCGCGGTGAGTGTGAAGCCCGGATGAGACGCGC 726  
 Db 661 AACTTCCCATCAGCCCATGAGACCGGTGCGCGGTGAGTGTGAAGCCCGGATGAGACGCGC 720  
 QY 727 CCGAAGGTGAAGCAAGTGCCTGACCGAGGAGAAAGATCAAGGCCCTGACCGCATCTGC 786  
 Db 721 CCGAAGGTGAAGCAAGTGCCTGACCGAGGAGAAAGATCAAGGCCCTGACCGCATCTGC 780  
 QY 787 GAGGATGAGAGAGAGAGGCGCAAGATCAACAGATGCGCCCGGAGAACCTCTTACAACCC 846  
 Db 781 GAGGATGAGAGAGAGAGGCGCAAGATCAACAGATGCGCCCGGAGAACCTCTTACAACCC 840  
 QY 847 CCGGTGTCGCGCATCAAGAGAGAGACCGACCAAGTGGCGCAAGCTGTGTGAATCTCCGC 906  
 Db 841 CCGGTGTCGCGCATCAAGAGAGAGACCGACCAAGTGGCGCAAGCTGTGTGAATCTCCGC 900  
 QY 907 GAGCTGAACAAGACCGACCGAGATCTGTGAGAGGTGACGTGGGATCCCCACCGCGCC 966  
 Db 901 GAGCTGAACAAGACCGACCGAGATCTGTGAGAGGTGACGTGGGATCCCCACCGCGCC 960  
 QY 967 GGGCTGAAGAGAGAGAGAGCGTGAACCGTGTGAGACGTGGGCGACGCTTACAGCGTG 1026  
 Db 961 GGGCTGAAGAGAGAGAGAGCGTGAACCGTGTGAGACGTGGGCGACGCTTACAGCGTG 1020  
 QY 1027 CCGCTGAGAGAGAGCTTCCGAGAGTCAACCGCTTCAACATCCCGAGATCAACAGAG 1086  
 Db 1021 CCGCTGAGAGAGAGCTTCCGAGAGTCAACCGCTTCAACATCCCGAGATCAACAGAG 1080  
 QY 1087 ACCCCCGGATCCGCTACCAAGTCAACGTGTGCCCCAGGGCTGGAAGGAGCGCCAGC 1146  
 Db 1081 ACCCCCGGATCCGCTACCAAGTCAACGTGTGCCCCAGGGCTGGAAGGAGCGCCAGC 1140  
 QY 1147 ATCTTTCAGAGAGATCAACAGTCTGTGAGACCTTTCGCGCGCCGACACCCGAGATC 1206  
 Db 1141 ATCTTTCAGAGAGATCAACAGTCTGTGAGACCTTTCGCGCGCCGACACCCGAGATC 1200  
 QY 1207 GTGATTCACCA-----GGCGCCCTGTAGCTGGGCGAGCGACTGTGAGATCGGCGAGAC 1260  
 Db 1201 GTGATTCACCAAGTACATGAGACCTGTGAGCTGGGCGAGCGACTGTGAGATCGGCGAGAC 1260  
 QY 1261 CGCGCAAGATCGAGAGCTCGCAAGACCTGTGCTGGCTGGGCTTTCACCAACCCCGAGC 1320  
 Db 1261 CGCGCAAGATCGAGAGCTCGCAAGACCTGTGCTGGCTGGGCTTTCACCAACCCCGAGC 1320  
 QY 1321 AAGAAGACCAAGAGAGAGCGCCCTTCTGTGATGGGCTACGAGCTGACCCCGACAG 1380

Db 1321 AAGAAGACCAAGAGAGAGCGCCCTTCTGTGATGGGCTACGAGCTGACCCCGACAG 1380  
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 ; Sequence 31, Application US/10241009  
 ; Publication No. US20030170614A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEGEDE, Jan  
 ; APPLICANT: BARNETT, Susan  
 ; APPLICANT: LIAN, Ying  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE B  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE B  
 ; PILE REFERENCE: 2300-1621.21  
 ; CURRENT APPLICATION NUMBER: US/10/241,009  
 ; CURRENT FILING DATE: 2002-12-13  
 ; NUMBER OF SEQ. ID NOS: 68  
 ; SOFTWARE: Patent Ver. 2.0  
 ; SEQ. ID NO 31  
 ; LENGTH: 2466  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence:  
 ; OTHER INFORMATION: p2Polinaopt.YM.SF2  
 US-10-241-009-31  
 Query Match 87.0%; Score 2142; DB 12; Length 2466;  
 Best Local Similarity 92.7%; Pred. No. 0;

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Search completed: October 12, 2003, 17:33:30  
Job time : 444.667 secs

GenCore version 5.1.6  
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OM nucleic - nucleic search, using sw model

Run on: October 12, 2003, 11:43:37 ; Search time 113.609 Seconds  
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Scoring table: IDENTITY NUC  
Gapop 10.0 , Gapext 1.0

Searched: 569978 seqs, 220691566 residues

Total number of hits satisfying chosen parameters: 1139956

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

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6: /cgn2\_6/prodata/2/ina/backfiles1.seq.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1678.6	68.0	4307	US-09-552-950-2	Sequence 2, Appli
2	1651.4	66.9	9772	US-09-552-950-5	Sequence 5, Appli
3	1227.2	49.7	9010	US-09-184-418C-8	Sequence 8, Appli
4	1196.2	48.4	8972	US-09-184-418C-9	Sequence 9, Appli
5	1189	48.2	8959	US-09-184-418C-11	Sequence 11, Appli
6	1165.6	47.2	8992	US-09-184-418C-4	Sequence 4, Appli
7	1132	45.8	2601	US-09-117-217-7	Sequence 7, Appli
8	1132	45.8	2601	US-09-117-217-9	Sequence 9, Appli
9	1132	45.8	2601	US-09-117-217-11	Sequence 11, Appli
10	1132	45.8	2601	US-09-117-217-13	Sequence 13, Appli
11	1132	45.8	2601	US-09-735-487-7	Sequence 7, Appli
12	1132	45.8	2601	US-09-735-487-9	Sequence 9, Appli
13	1132	45.8	2601	US-09-735-487-11	Sequence 11, Appli
14	1132	45.8	2601	US-09-735-487-13	Sequence 13, Appli
15	1132	45.8	4307	US-09-552-950-1	Sequence 1, Appli
16	1132	45.8	9719	US-09-700-304-1	Sequence 1, Appli
17	1128.8	45.7	9050	US-09-184-418C-7	Sequence 7, Appli
18	1125.6	45.6	7399	US-08-418-848A-9	Sequence 9, Appli
19	1125.6	45.6	9709	US-08-188-583-5	Sequence 5, Appli
20	1125.6	45.6	9709	US-08-388-353-1	Sequence 1, Appli
21	1125.6	45.6	9709	US-08-488-551B-1	Sequence 1, Appli
22	1125.6	45.6	9709	US-09-309-572-15	Sequence 15, Appli
23	1125.6	45.6	12479	US-09-318-138-13	Sequence 13, Appli
24	1125.6	45.6	12494	US-08-935-312-13	Sequence 13, Appli
25	1125.6	45.6	12494	US-08-848-760B-33	Sequence 33, Appli
26	1125.6	45.6	15581	US-08-646-538-35	Sequence 35, Appli
27	1125.6	45.6	15581	US-09-503-222-35	Sequence 35, Appli

28	1122.8	45.5	3000	4	US-09-184-418C-74	Sequence 74, Appli
29	1121	45.4	8968	4	US-09-184-418C-1	Sequence 1, Appli
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32	1108	44.9	8954	4	US-09-184-418C-6	Sequence 6, Appli
33	1101.2	44.6	3017	4	US-09-184-418C-83	Sequence 83, Appli
34	1099	44.5	3011	4	US-09-184-418C-101	Sequence 101, Appli
35	1088.6	44.1	8987	4	US-09-184-418C-2	Sequence 2, Appli
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37	1085.2	44.0	9060	4	US-09-184-418C-10	Sequence 10, Appli
38	1080.8	43.8	9746	1	US-08-022-835-3	Sequence 3, Appli
39	1080.8	43.8	9746	1	US-08-388-809-3	Sequence 3, Appli
40	1080.8	43.8	9746	2	US-08-647-714-3	Sequence 3, Appli
41	1079.6	43.7	8932	3	US-09-124-900-1	Sequence 1, Appli
42	1079.6	43.7	8933	3	US-08-463-210-4	Sequence 4, Appli
43	1079.6	43.7	8933	3	US-09-620-958A-3	Sequence 3, Appli
44	1079.6	43.7	8933	3	US-09-620-958A-4	Sequence 4, Appli
45	1079.6	43.7	8933	3	US-09-620-958A-9	Sequence 9, Appli

ALIGNMENTS

RESULT 1  
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; Sequence 2, Application US/09552950  
; Patent No. 6541248  
; GENERAL INFORMATION:  
; APPLICANT: Oxford Biomedica (UK) Limited  
; TITLE OF INVENTION: Anti-Viral Vectors  
; FILE REFERENCE: 674524-2004  
; CURRENT APPLICATION NUMBER: US/09/552,950  
; CURRENT FILING DATE: 2000-04-20  
; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 2  
; LENGTH: 4307  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:gagpol-SVNGp - codon  
; OTHER INFORMATION: optimised gagpol sequence  
US-09-552-950-2

Query Match	68.0%	Score	1678.6;	DB	4;	Length	4307;
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QY	309	GCTGAGGT-----GCGCGCGCAACCCCGCAGCGAGCGCGCGCGCGCGG	362				
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 Qy 657 CTGCACTCTGAATCTCCCATCAAGCCCATGAGACCGTGCCTGTAAGCTGAAGCCCG 716  
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 Qy 717 CATGAGCGCCCGCAGAGTGAAGCAGTGGCCCTGACCGAGAGAAATCAAGCCCTGAC 776  
 Db 1805 GATGAGCGCCCGCAGAGTGAAGCAGTGGCCCATGACAGAGAGAAATCAAGCCCTGAC 1864  
 Qy 777 CGCATCTGAGAGAGATGAGAGAGAGGAGGAGCAGATCAACAGATCGGCGCCGAGAAC 836  
 Db 1865 GAGATTTGACACAGAGATGAGAGAGAGGAGAAATCTCCAGATTTGGCCCTGAGAACCC 1924  
 Qy 837 CTACACACACCCCGTGTTCGCCATCAGAGAGAGACAGACCAAGTGGCCAGCTGT 896  
 Db 1925 GTACACACACCGCGGTGTTCGCCATCAGAGAGAGACCTGACAGAAATGGCCGAGCTGT 1984  
 Qy 897 GAGCTTCGCGAGCTGAACAAGCGACCCAGACCTTCTGGAGAGGTGACCTGGGATCCC 956  
 Db 1985 GAGCTTCGCGAGCTGAACAAGCGACCCAGACCTTCTGGAGAGGTGACCTGGGATCCC 2044  
 Qy 957 CCACCCCGCGCGCTGAAGAGAGAGAGAGGAGGAGTGCCTGTGGAGCGGGCGAGCCCTA 1016  
 Db 2045 GACACCCCGCAGGCTGAAGAGAGAGAAATCTGTGACCTTGTGATGTGGTATGCTTA 2104  
 Qy 1017 CTTCAGCGTGCCTGTGACAGAGACTTCGCAAGTACACCGCTTCAACATCCCAAGAT 1076  
 Db 2105 CTTCAGCGTGCCTGTGACAGAGACTTCGCAAGTACACCGCTTCAACATCCCAAGAT 2144  
 Qy 1077 CAAACAAGAGACCCCGGCAATCCGCTACAGTACAGAGTGTGCTGCCCGAGGCTGAAGG 1136  
 Db 2165 CAAACAAGAGACCCCGGCAATCCGCTACAGTACAGAGTGTGCTGCCCGAGGCTGAAGG 2224  
 Qy 1137 CAGCCCGAGCATCTTCCAGAGCAGATGACCAAGATCTTGAGCCCTTCGCGCCGCA 1196  
 Db 2225 CTCTCCCGCATCTTCCAGAGTACATGACCAAAATCTGAGCCCTTTCGCAAAACGA 2284  
 Qy 1197 CCGCGAATCTGATCTACAGTACATGACGACCTGTAAGTGGCGACGACCTTGAAT 1256  
 Db 2285 CCGCGAATCTGATCTACAGTACATGACGACCTGTAAGTGGCGACGACCTTGAAT 2344  
 Qy 1257 CGGCGAGACCGCGCAAGATGAGAGGCTGCGAGACCTGCTGGCTGGGCTTCA 1316  
 Db 2345 AGGCGAGACCGCGCAAGATGAGAGGCTGCGAGACCTGCTGGCTGGGCTTCA 2404  
 Qy 1317 CACCCCGACAAAGAGACAGAGAGCCCTTCCTGTGATGGGCTTACGAGTGA 1376  
 Db 2405 CACACCCGACAAAGAGACAGAGAGCCCTTCCTGTGATGGGCTTACGAGTGA 2464  
 Qy 1377 CCGCGAATCTGATCTACAGTACATGACGACCTGTAAGTGGCGACGACCTTGAAT 1436  
 Db 2465 CCGCGAATCTGATCTACAGTACATGACGACCTTGAAGTGGCGACGACCTTGAAT 2524  
 Qy 1437 CGACATCCAGAGTGTGGCAGAGTGAAGTGGCGACAGATCTACCCCGCATCA 1496

Db 2525 CGACATACAGAGCTGTGGGGAGTTGAAGTGGCCAGTCAATTTACCGAGGATTA 2584  
 Qy 1497 GGTGCGCAGTGTGCAAGCTGTGCGCGCGCCAGGCTTGAACCATCTGACCT 1556  
 Db 2585 GGTGAGGAGCTGTGCAAACTCTCCCGGAAACCAAGCACTGACAGAGGTATCCCCCT 2644  
 Qy 1557 GACCGAGAGGCTGAGCTGTGGAGCTGGCGAGAAACCGAGATCTTGGCGAGCCCTGCA 1616  
 Db 2645 AACCGAGAGGCTGAGCTGTGGAGCTGGCGAGAAACCGAGATCTTAAAGAGCCCTGCA 2704  
 Qy 1617 CGGCGTGTCTACAGACCCCAAGAGCCTGTGTGGCGAGATCCAGAGCAGGCGACGA 1676  
 Db 2705 CGGCGTGTCTACAGACCCCAAGAGCCTGTGTGGCGAGATCCAGAGCAGGCGACGA 2764  
 Qy 1677 CCAATGACCTTACAGATCTACAGAGCCCTTCAAGACCTGAAGACCGGCAATGAC 1736  
 Db 2765 CCAATGACCTTACAGATCTTACAGAGCCCTTCAAGACCTGAAGACCGGCAATGAC 2824  
 Qy 1737 CAGATGCGACCGCCCAACCAAGAGCCTGTGTGGCGAGATCCAGAGCAGGCGACGA 1796  
 Db 2825 CCGATGAGGAGTCCCACTGATGAGAGCCTGTGTGGCGAGATCCAGAGCAGGCGACGA 2884  
 Qy 1797 CGCCATGAGAGCCTGTGTGTGGCGAGAGACCCCAAGTCCGCTGACATCAAGAA 1856  
 Db 2885 CACCAACGAAAGCATCTGTGTGTGGGAGAGACTCTTAAGTCAAGCTGCCATCAAGAA 2944  
 Qy 1857 GAGAGCTGTGGAGACCTGTGTGAGCCGACTACTGTGAGGCGACCTGTGATCCCGAGTGGGA 1916  
 Db 2945 GAGAGCTGTGGAGACCTGTGTGAGCCGACTACTGTGAGGCGACCTGTGATCCCGAGTGGGA 3004  
 Qy 1917 GTTGTGAAACCCCGCTGTGTGAGCTGTGTGATCAAGCTGAGAGAGAGCCATCAT 1976  
 Db 3005 GTTGTGAAACCCCGCTGTGTGAGCTGTGTGATCAAGCTGAGAGAGAGCCATCAT 3064  
 Qy 1977 CGGCGCGGAGACCTTCTTACGTGAGACGCGCGCCCAACCGGAGACCAAGTGGCAAGG 2036  
 Db 3065 CGGCGCGGAGACCTTCTTACGTGAGAGGCGCGCTTACAGAGAGCTTAAGCTGGCAAGG 3124  
 Qy 2037 CGGCTAGTACCGACCGGCGCGGAGAGATGTGAGCTTACCGAGACCAACCA 2096  
 Db 3125 CGGCTAGTACCGACCGGCGCGGAGAGATGTGAGCTTACCGAGACCAACCA 3184  
 Qy 2097 GAAGACCGAGCTGAGGCTTACAGCTGCGCTGACAGACAGCGGCGAGGAGGAACT 2156  
 Db 3185 GAAGACCGAGCTGAGGCTTACAGCTGCGCTGACAGACAGCGGCGAGGAGGAACT 3244  
 Qy 2157 CGTACCGAGCGAGTACGCTTGGGATCATTCAGGCGGAGCCGAGACCAAGCGAG 2216  
 Db 3245 CGTACCGAGCTTACAGTATCCCTGGGATCATTCAGGCGGAGCCGAGACCAAGCGAG 3304  
 Qy 2217 CGAGCTGTGAAACCAATCTACAGAGCTGATCCAGAGAGAGAGGATGATCTGAGCTG 2276  
 Db 3305 CGAGCTGTGAAACCAATCTACAGAGCTGATCCAGAGAGAGAGGATGATCTGAGCTG 3364  
 Qy 2277 GGTGCGCGCCCAAGGAGCTCGCGGCAACGAGCAGATGACAAAGTGTGAGCAAGG 2336  
 Db 3365 GGTGCGCGCCCAAGGAGCTTGGCGGATGAGCAGTGTGACAGCTGTGTGAGCTG 3424  
 Qy 2337 CATCCGAGGTGTCTTCTGAGCGGATGCA 2369  
 Db 3425 CATCCGAGGTGTCTTCTGAGCGGATGCA 3457

RESULT 2  
 US-09-552-950-5  
 Sequence 5, Application US/09552950  
 Patent No. 6541248  
 GENERAL INFORMATION:  
 APPLICANT: Oxford Biomedica (UK) Limited  
 TITLE OF INVENTION: Anti-Viral Vectors  
 FILE REFERENCE: 674524-2004  
 CURRENT APPLICATION NUMBER: US/09/552, 950  
 CURRENT FILING DATE: 2000-04-20

1 NUMBER OF SEQ ID NOS: 22  
2 SOFTWARE: PatentIn Ver. 2.1  
3 SEQ ID NO 5  
4 LENGTH: 9772  
5 TYPE: DNA

6 ORGANISM: Artificial Sequence

7 FEATURE:

8 OTHER INFORMATION: Description of Artificial Sequence:PSYNGP

9 US-09-552-950-5

Query Match 66.9%; Score 1651.4; DB 4; Length 9772;

Best Local Similarity 82.2%; Pred. No. 1.4e-262;

Matches 1951; Conservative 0; Mismatches 406; Indels 16; Gaps 4;

QY	12	CATGGCGAGGCCATGAGCCAGG---CCACCAGCGCAACATCTCTGATGAGGGCAGCAA	68
DB	2193	CTTGGCTGAGGCCATGAGCCAGGTGACCACTCCGCTACCATCATGATGAGCGCGGCAA	2252
QY	69	CTTCAAGGGCCCCAAGCGCATCATCAAGTCTTCAACTGGCGCAAGGAGGGCCACATGCG	128
DB	2253	CTTTCGGAACCAACGCAAGATCGTCAAGTCTTCAACTGTGGCAAGAGGGCACAACG	2312
QY	129	CGCAACTGCGCGCCCCCGCGAAGAGGGCTCTGGAAGTGGCGCAAGGAGGGCCACCA	188
DB	2313	CGCAACTGCGGGCCCCCTAGGAAAAAGGGCTCTTGGAAATGTGAAAGGAAAGCAACCA	2372
QY	189	GATGAGGACTGCACGAGCGCCAGGCCAACTTCTTCGCGAGGACCTGGCCCTCCCCCA	248
DB	2373	AATGAAAGATTGACTGAGAGACAGGCTAA-TTTTATTAGGGAAGATCTGGCCCTCCCA	2431
QY	249	GGCGAAGGCCCGCGAGTCTCCCGAGCGAGCAAGAACCGCGCAACAGCCCCACAGCGCGA	308
DB	2432	AGGGAAGGCCAGGGAATTTCTTCAAGCAGACACAGCCACAGCCCCACCAAGAGA	2491
QY	309	GCTGAGAGTGGCGG-----CGAAACCCCGCAGCGAGCGCGCGCGAGCGCGAGGG	362
DB	2492	GCTTCAGGTTTGGGGAAGAGACAACAACTCCCTCTCAGAAGCAGGAGCGCGATAGA	2551
QY	363	CA-----CCCTGAATCTCCCGCAGATCACTCTGTGGCAGCGCCCTCGTGAGCATCA	416
DB	2552	AACTGTATCTTTAGTCTTCCCTCAGATCACTCTTTGGCAGCGACCCCTCGTCACAATA	2611
QY	417	GCTGGCGGCCAGATCAAGAGAGCCCTGCTGGACACCGCGCGCAGCACACCGTGTGGA	476
DB	2612	GATAGGGGGCAGCTCAAGAGGCTCTCTGACACCGAGCAGACACACCGTGTGGA	2671
QY	477	GGAGATGAGCTTCCCGGCAAGTGAAGCCCAAGATGATCGCGGCGATCGGGGTTTCT	536
DB	2672	GGAGATGCTGTTGCCAGGCGCGTGGAAAGCCGAAGATGATCGGGGGAAATCGGGGTTT	2731
QY	537	CAAGTGGCCAGTACGACAGATCTGTATCGAGATCTCGGCGCAGAGGCCATCGGCAC	596
DB	2732	CAAGTGGCCAGTATGACAGATCTCTATCGAAATCTCGGCGCAAGGCTATCGGTAC	2791
QY	597	CGTCTGATCGGCCCCACCCCGTGAACATCATCGCGCGCAACATGCTCACCCAGCTGG	656
DB	2792	CGTCTGTTGGGCCCCACACCCCGTCAACATCATCGGACGCAACCTCTGACGAGATCG	2851
QY	657	CTGACCCCTGAATCTCCCATCAGGCCCATCGAGACCGTGGCCGTGAAGCTGAAGCCCG	716
DB	2852	TTGCAAGCTGAATCTCCCATTAGCCCTATCGAGACGCTACCGGTGAAGCTGAAGCCCG	2911
QY	717	CATGACGCGCCCCAAGTGAAGCAGTGGCCCTCTGACCGAGGAGAGATCAAGGCCCTGAC	776
DB	2912	GATGACGCGCCCCAAGGTCAAGCAATGGCCATTGACAGAGGAGAGATCAAGGCCATGT	2971
QY	777	CGCCATCTCGAGGAGATGGAAGAGGGCGCAAGATCACCAAGATCGGCCCGCGAGAACCC	836
DB	2972	GGAGATTGCAAGAGATGGAAGAGGAGGAAATCTCCAAGATTGGCCCTGAGAACCC	3031
QY	837	CTAACACACCCCGTGTTCGCCATCAAGAAAGAGGACGACCAAGTGGCGCAAGCTGGT	896
DB	3032	GTACACACCGCGTGTTCGCCATCAAGAAAGAGGACTCGACGAAATGCGCAAGCTGGT	3091

QY	897	GGACTTCCGCGAGCTGAACAAGCGCACCCAGACATTTCTGGAGGTGACGTGGGATCC	956
DB	3092	GGACTTCCGCGAGCTGAACAAGCGCACCGCAAGACTTCTGGAGGTTCAGCTGGCATCC	3151
QY	957	CCACCCCGCGCGCTGAAGAAGAGCGTGCCTGCTGGAGCGTGGCGGACGCCCTA	1016
DB	3152	GCACCCCGCAGGGCTGAAGAAGAAATCCGTGACCGTACTGGATGTGGGTATGCCCTA	3211
QY	1017	CTTACGCGTGGCCCTGGACGAGGACTTCCGCAAGTACACCGCTTCCACCATCCCCAGCAT	1076
DB	3212	CTTCTCCGTTCCCTCGGACGAGACTTTCAGGAAGTACACTGCTTCCACATCCCTTCGAT	3271
QY	1077	GAACAACGAGACCCCGGATCCGCTACAGTACAACTGCTGCTGCCAGGCTGGAAGGG	1136
DB	3272	CAACAACGAGACACCGGGGATTCGATATACGTACAACTGCTGCCAGGCTGGAAGGG	3331
QY	1137	CAGCCCCAGCATCTTCCAGAGCAGATGACCAAGATCTTGGAGCGCTTCCGCGCCGCAA	1196
DB	3332	CTTCTCCGCAATCTTCCAGAGTAGCATGACCAAAATCTTGGAGCCTTCCGCAACAGAA	3391
QY	1197	CCCCAGATCTGTGATCTACAGTACATGGAACACCTGTACGTGGGACGACCTTGAGAT	1256
DB	3392	CCCCGACATCGTCACTATCAGTACATGATGATGATGATGATGATGATGATGATGAT	3451
QY	1257	CGGCGAGCACCGCGCAAGATCGAGAGCTGCGCAAGCACTGCTGCGCTGGGGCTTCA	1316
DB	3452	AGGGCAGCACCGCACCAAGATCGAGAGCTGCGCAGCACCTGTTGAGGTGGGGACTGAC	3511
QY	1317	CACCCCCACAAAGACCAAGAGGAGCCCCCTTCTGTGATGGGTAGAGCTGCA	1376
DB	3512	CACACCCGACAGAGACCAAGAGAGGCTCCCTTCTTGGATGGGTAGAGCTGCA	3571
QY	1377	CCCCGACAAAGTGAACCGTGCAGCCCATCGAGTGCOCGAGAGAGAGCTGGAACGTGA	1436
DB	3572	CCCTGACAAATGGAACCGTGCAGCTTATCGTGTGCGCAGAAAGACAGCTGACGTCAA	3631
QY	1437	CGACATCAGAGAGCTGGTGGCAAGCTGAACCTGGGCGCAGCAGATCTACCCGGCATCA	1496
DB	3632	CGACATCAGAGAGCTGGTGGGAAGTTGAACCTGGGCGCAGTCAATTTACCCAGGATTA	3691
QY	1497	GGTGGCGCAGCTGTCAAGCTGCTCGCGGCGCCAAAGGCCCTGACCGACATCGTGGCCCT	1556
DB	3692	GGTGGCGCAGCTGTCAAGCTTCTCGGCGAACCAAGGCACTCAGAGGTGATCCCCCT	3751
QY	1557	GACCGAGAGGCGGAGCTGGAGCTGGCGAGAACCGCGAGATCTCTGCGGACGCCGTGCA	1616
DB	3752	AACCGAGAGGCGGAGCTCGAACTGGCAGAAAAACGAGAGATCTCTAAAGGAGCCCGTGA	3811
QY	1617	CGGCGTGTACTACGACCCCGCAGAGGACCTGGTGGCGGAGATCCAGAGCAGGCGCAGA	1676
DB	3812	CGGCGTGTACTATGACCCCTCCAGAGACCTGATCCCGGAGATCCAGAGCAGGCGCAGG	3871
QY	1677	CCAGTGGACCTACCAAGATCTTACAGAGCCCTTCAAGAACCTGAAAGACCGGCAAGTACG	1736
DB	3872	CCAGTGGACCTATCAGATTTACAGAGCCCTTCAAGAACCTGAAAGACCGGCAAGTACG	3931
QY	1737	CAAGTGGACCGGCCACCAACGACGTGAAGCAGTGAACCGAGGCGGTGCAAGAT	1796
DB	3932	CCGATGAGGGGTGCCCCACACTAACGAGCTCAAGCAGCTGACCCGAGGCGGTGCAAGAT	3991
QY	1797	CGCCATGAGAGGATCTGTGCTGGGCAAGACCCCGCAAGTTCGCCCTGCCATCCAGAA	1856
DB	3992	CACCAACGAAAGCATCTGTGATCTGGGGAAGACTCTTAAGTTCAAGCTGCCATCCAGAA	4051
QY	1857	GGAGACCTGGGAGACCTGGTGAACCGACTATGGCAGGCCACCTGGATCCCGAGTGGGA	1916
DB	4052	GGAAACCTGGGAACCTGGTGAACAGATATTTGGCAGGCCACCTGGATCTCTGAGTGGGA	4111
QY	1917	GTTGTTGAACACCCCGCTGGTGAAGCTGTGTTACAGCTGGAGAGAGGAGGCCATCAT	1976
DB	4112	GTTGTTGAACACCCCGCTGGTGAAGCTGTGTTACAGCTGGAGAGAGGAGGCCATCAT	4171

QY	1977	CGGCCCGAGACCTTCATCGTGGAGGGGCGCCCAACCGCAGACCAAGATCGGTAAGC	2036
Db	4172	GGCGCCGAAACCTTCTCATGTGGATGGGCGCGCTAACGAGGAGATTAGCTGGGAAAGC	4231
QY	2037	CGGCTACGTGACCGAACCGGGGCGCGAGAAAGTCTGTGAGCTGACCGAGACCAACCA	2096
Db	4232	CGGATACGTCACTAAACGGGGGAGACAAAGTTGTCACTCTCACTGACACCAACCA	4291
QY	2097	GAAGACCGAGCTGCAAGGCCATTCAGCTGGCCCTGCAGACACGGCAGAGTGAACAT	2156
Db	4292	GAAAGCTGAGTGCAGGCGCATTTTACCTCGCTTTGAGAGACTCGGGGCTGAGAGTGAACAT	4351
QY	2157	CGTACCGGACGACCGAGTACGGCCCTGGGGATATTCAGGCCACGCCCCAGACAGCAGAG	2216
Db	4352	CGTGACAACTCTCAGTATGCCCTGGGGATATTCAAACCCAGCGACGAGTGAGTGC	4411
QY	2217	CGAGCTGGTGAACCAAGATCATCGAGCAGCTGATCAAGAAGAGAAAGGTACCTGAGACTG	2276
Db	4412	CGAGCTGTCATATGATCATCGAGCAGCAGCTATCAAGAGGAAAGGTCTATCTGGGCTG	4471
QY	2277	GGTCCCGCCCAAGGGCATCGGCGGCGCAAGACAGATCGACCAAGCTGTGTGACCAAGG	2336
Db	4472	GGTACCGGCCCAAAAGCATTTGGGGGCAATGAGCAGAGTGCACAAAGCTGCTCGGCTGG	4531
QY	2337	CATCCGAGGTGCTGTTCTTCGGAAGGATGCA	2369
Db	4532	CATCAGGAGGTGCTATTCTCGAATGCGATGCA	4564

### RESULT 3

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US-09-184-418C-8
; Sequence 8, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONING AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 8
; LENGTH: 9010
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96ZM651, 137..1621:"gag", 1426..4425:"pol",
; OTHER INFORMATION: 4370..4948:"vif", 4868..5178:"vpr",
; OTHER INFORMATION: 5159..5373:"7734", 7824:"tat", 5298..5373-7734..7981:"rev"
; OTHER INFORMATION: 5387..5647:"vpu", 5565..8171:"env", 8173..8793:"nef"
US-09-184-418C-8

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	Query Match	49.7%	Score 1227.2	DB 4	Length 9010
	Best Local Similarity	70.3%	Pred. No. 4.7e-193		
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QY	14	TGGCCAGGCCATGAGCCAGCCACACGCGCCACATCTGATGACGCGCAGCACTTCA	73		
Db	1221	TGGCTGAGGCATAGAGCCAAACAATAGTGTAAACATCATGATGCAGAAAAGCAATTTA	1280		
QY	74	AGGGCCCCAAGCGCATCATAGTGCCTCACTCGGCGCAGAGAGGCGCATATGCCCGCA	133		
Db	1281	AAGGAAATMAAGATGTTAAATGTTTAACTGTGTAAAGAAAGGCGCATATGCCAGAA	1340		
QY	134	ACTGCGCGCGCCCCCGCAAGAGGCTCTTGAAAGTGGCGCAAGAGGCGCACACAGATCA	193		
Db	1341	ATTGCAAGGGCCCCCTAGGAAAAAGGGCTGTGGAAATGTGAAAAGAGGAGCACACAAATGA	1400		
QY	194	AGGACTGCACCGAGCGCCGACGCCCACTTCTTCCGCGAGGACTTGGCCCTTCCCGAGGSCA	253		
Db	1401	AAGACTGTACTGAGAGGCGAGGCTAA-TTTTTAAAGGAAATTTGGCTTCCCAAGAGGA	1459		

QY	25	AGGCCCCGAGTTTCCCGACGAGCAACCGGCGCAACGCCCCCAACGCGGAGCTGC	313
Db	1460	AGGCGAGGAAATTTCTTCTCAGAACAGGCCAGGCCAACGCCCCCAACAGAGGCTTC	151
QY	314	AGGTGCGCGCGACAAACCCCGCAGCGAGGCCGCGCGAGCGCAGGCGACCTTGAACT	373
Db	1520	AGGTTGAGGAGAACACACCCCGCTCGAAGCGAGGATGGAAGACAGGGAACCTTAAT	157
QY	374	TGCCCCAGATCAACCTGTGAGCAGCGCCCCCTGTGTAGCATCAAGTGGCGCGAGATCA	433
Db	1580	TCCCTCAATCACTCTTTGGACGCAACCCCTGTCTCATATAAAGGAGGGGCGCAATTA	163
QY	434	AGAGGCGCTGTGTGACACCGCGCGCGACGACACCGTGTGTGAGGAGATGAGCCTGGCG	493
Db	1640	AGGAGGCTCTCTTAACACGCGGAGAGGATACAGATATTGAAGAAATATAATTGCGAG	169
QY	494	GCAAGTGGAAACCCAAAGATGATCGCGCGCATCGCGCTTCATCAAGTGCACAGTAC	553
Db	1700	GCAATGGAACCAAAAAATGATGAGAGAAATTGAGGCTTATTCGAAGTAAACAATATG	175
QY	554	ACCAATCCGTATCGAGATCTGCGGCAAGAAAGGCGCATGCGACCGTGTGATCGGCGCA	613
Db	1760	ATCAATATCTATGGAATTTCTGGAATAAAGCTATAGGTACAGTATTAGTAGACCTA	181
QY	614	CCCCGTGAACATCATCGCGCGCAACATGCTGACCCAGCTGGGCTGACCCCTGAATTC	673
Db	1820	CACCTGTCAACATTAATTGGAAGAAATATGTTGACTCAGCTTGATGACACATAAATTTTC	187
QY	674	CCATAGCGCCATCGAGACCGTGGCGCGGAGACTGAACCCCGCATGACCGGCCCAAG	733
Db	1880	CATTTATGCTATTGAACTGTACAGATTAATTAACCGAGAAATGATGCGCCCAAG	193
QY	734	TGAACAGTGGCCCTCGACCGAGAGAAAGATCAAGCGCTGACCCCATCTCGAGAGAA	793
Db	1940	TTAAACAATGGCATTTGACAGAGAGAAATTAAGCTTACACGCAATTTGTGAAGAA	199
QY	794	TGGAGAAAGAGGGCAAGATCACCAAGATCGGCCCGGAGAACCTTACACACCCCGTGT	853
Db	2000	TGGAGAAAGAGGAAAAATTAACAAATATGGGCTGAAATCAATATACTCCAGATAT	205
QY	854	TGCGCATCAAGAGAGAGACAGACCAAGTGGCGGAGGTGTGACTTCCCGAGCTGA	913
Db	2060	TTGCCATTAATAAAGAGACAGTACTAGTGGCGAAATTAAGTATTTTCAGGAACTCA	211
QY	914	ACPAAGCGCAACCGAGCTTCTGGAGAGTGCAGCTGGGCAATCCCGACCCCGCGCTGA	973
Db	2120	ATAAAGAACTCAAGACTTTTGGGAGAGTTCATATTGAAATACACACCCAGAGGTTAA	217
QY	974	AGAGAAABAAGCGGTGACCGTGTGACGTTGGGGGAGAGGCTTACCTTCAGCGTCCCTGG	103
Db	2180	AAAGAAABAAATCACTGACAGTACTGAGTGTGGGGGAGCAATTTTTCAGTCTCTTAG	223
QY	1034	ACGAGCACTTCGAGATGACACCGCTTCAACATCCCGAGATCAACAAGACCCCG	109
Db	2240	ATGAAAGCTTGAGGAAATATCTGATTCACACATACCTAAGTAAACAATGAAACACCA	229
QY	1094	GCAATCGCTACCAATGACAGTGTCTCCCGCAGGGGTGGAAGGGCGACCCCGACATCTTC	115
Db	2300	GGATTAGTATCAATATATATGTGCTTCCACAGGGATGGAAGGATCAACAGCAATATTC	235
QY	1154	AGAGCAGATACCAAGATCTCTGAGACCTTCCGCGCGCGCAACCCCGAGATCGATCT	121
Db	2360	AGAGAGCATGACAAAAATCTTTAGAGCCCTTCAAGGCAACAAATCCACATAGTCACT	241
QY	1214	ACCAATCATGAGAGACTTGAACGTGGGCAAGCATGGAAGTGGCCAGCACTCGCGCA	127
Db	2420	ATCAATATGTGATGACCTGTATGTAGATCTGACTTGAATGAATGGGCAACATAGAGCA	247
QY	1274	AGATCGAGAGCTGTGCAAGACCTGCTGCGCTGGGCTTGAACAACCCCGCAAGAGC	133
Db	2480	AAATGGAAGCTTAAGAGACATCTATTAAAGTGGGATTTACACACACAGAGAAAC	253

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1334 ACCAGAGAGAGCCCTTCTCTGGATGGCTACGAGCTGCACCCCGACAAGTGACCG 1393
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2540 ATCAGAAAGAACCCCATTTCTTGGATGGGTATGNACTCCATCTCTGACAAATGACAG 2599
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1394 TGCAGCCATCGAGCTGCCCGAGAGAGAGCTGGACCGTGAACGACATCCAGAACTGG 1453
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2600 TACAGCCTATACAGCTGCGCAAGAAAGATAGCTGCACTGTTAATGATATACAGAACTAG 2659
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1454 TGGGCAAGCTGAATGGCGCAGCCAGATCTACCCCGCATCAAGGTGCGCAGCTGTGCA 1513
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2660 TGGAAATAATACTGGCAGAGTCAGATTTACGAGGGATTAAGTAAGCAACTTTGTA 2719
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1514 AGTGTGTCGCGCGCCCAAGCCCTGACCGACATCGTCCCTGACCGAGAGCGCGAGC 1573
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2720 AACTCTTAGGGAGCCAAAGCACTAACACATAGTACCACCTAACTGAAGAGCAGAT 2779
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1574 TGGAGCTGGCCGAGAACCGGAGATCTCTGGCGAGCCCGTGCAGCGGTGTACTAGACC 1633
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2780 TAGAATTGGCAGAGAACAGGAAATTTAAAGAAACCACTACATGCGGTATATTATGACC 2839
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1634 CCAGCAAGACCTGGTGGCGGAGATCCAGNAGCAGGCGCCACGACCACTGACCTACAGA 1693
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2840 CATCAAAAGACTTGTAGCTGAATACAGAAACAAGGGCATGACCAATGGACATATCAA 2899
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1694 TCTACGAGGAGCCCTTCAAGAACTGAAAGCCGSCAAGTACGCCAAGATGCGCACCGCC 1753
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2900 TTTACCAGGAACCATTTCAAAATCTGAAACACAGGAAGTATGCAAAATGAGACAGCCC 2959
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1754 ACACCAAGACGTGAAGCAGCTGACGAGCCGTGCAGAAAGATCGCCATGAGAGCATCG 1813
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2960 ACACATAATGATGTAACAGTAAACAGAGCAGTGCAGAAATAGCCCTGGAGAGCATAG 3019
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1814 TGATCTGGGCAAGACCCCAAGTTCGCTCGCCATCCAGAGGAGACTGGGGAACCT 1873
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3020 TAATATGGGGAAGATTCCTAAATTTAGACTCCCATCCAAAGAAACATGGAAGACAT 3079
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1874 GTTGACCAACTACTGGCAGGCCACCTGGATCCCGAGTGGAGTTTCGTGAACACCCCCC 1933
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3080 GGTGGACAGACTATTGGCAAGCCACCTGGATTCTCTGAGTGGAGTTTGTATACCCCTC 3139
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1934 CCTGTGTGAAGCTGTGTACAGCTGGAGAGGAGCCCATCATCTGCGCGCGGAGACCTTCT 1993
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3140 TCTTAGTAAATATTGGTACCAGCTGGAGAAAGAACCCATAGTAGGAGCAGAAACCTTCT 3199
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1994 ACGTGAACGCGCGCCCAACCGGAGACCAAGATCGGCAAGCGCGCTACGTGACCGACC 2053
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3200 ATGTAGATGAGCAGCCAAATAGGAACTAAATTAGAAAGACGAGGTATATTCTGACA 3259
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2054 GGGCGCGGAGAGATCGTGAGCTTGACCGAGACCAACCAAGAGACCGAGCTGCAGG 2113
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3260 GAGGAAGGCAAAAATTGTTACTTCTTAACGAAACAAATCAGAGACTGTAATTACAAG 3319
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2114 CCATCCAGCTGSCCTTGAGGACAGCGGAGAGAGTGAACTGTAACATCGTGAACGACAGT 2173
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3320 CAATTTACCTAGCTTTGCAAGATTTCAGGATCAGAACTAAACATAGTAACCTACACT 3379
      |||||
2174 ACGCCCTGGGCATCATCCAGGCGCCAGCCCGACAAGAGCAGAGCGGTGTTGAACCA 2233
      |||||
3380 ATGCGTTAGGAATCATTCAGACATCCAGATAGAGTGAATCAGAGTTAGTCAACCAA 3439
      |||||
2234 TCATCAGCAGCTGATCAAGAGGAGAGGTGTACTGAGCTGGGTGCGCCGCCACAAGG 2293
      |||||
3440 TAATAGAACAAATTAATAAGAGGAAAGGTCTACCTGTCTGCGGTACCGACACATAAG 3499
      |||||
2294 GCATCGGCGGCAACGACGAGATCGCAAGCTGGTGAAGAGGCGCATCCGCAAGGTGCTGT 2353
      |||||
3500 GAATTTGAGGTAATGAACAGGTAGATAAATTAGTAAGCAAGGGAATCAGGAAGTGTCT 3559
      |||||
2354 TCCTTGAACGGCATCGA 2369
      |||||
3560 TTCTAGATGGAATAGA 3575
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## RESULT 4

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US-09-184-418C-9
; Sequence 9, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 9
; LENGTH: 8972
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96ZM751.3; 137.1632:gag; 1419.4435:pol;
; OTHER INFORMATION: 4380.4958:vif; 4898.5188:vpr; 5169.7814:tat;
; OTHER INFORMATION: 5308.7938:rev; 5407.5667:vpu; 5585.8128:env;
; OTHER INFORMATION: 8130.8753:nef
US-09-184-418C-9
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Query Match      48.4%; Score 1196.2; DB 4; Length 8972;
Best Local Similarity 70.0%; Pred. No. 5.6e-188;
Matches 1662; Conservative 0; Mismatches 693; Indels 20; Gaps 3;

QY      14 TGGCCGAGCCATGAGCCAGGCGCACGAGCCCAACATCTGATGAGCGCAGCAACTTCA 73
      |||||
Db      1214 TGCTGAGCANTGAGCCAGTAAACAATACAAATATATGATGAGAAAGCAATTTTA 1273
      |||||
QY      74 AGGCCCCAAGCGCATCATCAAGTCTTCAATCGCGCAAGGAGGCCACATCGCCCGCA 133
      |||||
Db      1274 AAGGCCCTTAAAGAAATGTTAAATGTTCACTGTGGCAGGGAAGGCATATAGCCAGGA 1333
      |||||
QY      134 ACTGCGCGCGCCCGCGCAGAGAGGCTCTGTGAAGTGGCGCAAGGAGGCGCCACCATCA 193
      |||||
Db      1334 ATTGAGGGCTCTCTGGGAAAAGAGCTGTGGAATGTGGAAGGAAGGACACCAATCA 1393
      |||||
QY      194 AGGACTGACCGCAGCGCCAGGCCAACTTCTTCCGCGAGGACCTGGCTTCCCGCAGGGCA 253
      |||||
Db      1394 AAGACTGTACTGAGAGACAGGCTAA-TTTTITAGGAAATTTGGCTTCCAGAGGGG 1452
      |||||
QY      254 AGGCCCGCGAGTTTCCCGAGCGAGCGAG-----AACCGCGCAACAGCC 295
      |||||
Db      1453 AGGCCGGGGAACCTTCTTCAGAACAGACGAGCCCAAGCCCCCAGCTCCAACAGCC 1512
      |||||
QY      296 CCACCAGCGCGGAGCTGCGAGTGGCGCGGACAAACCCCGCAGCGAGCGCGCGCGAGC 355
      |||||
Db      1513 CCACCAGCAGAGAGCTTCAGGTTCCAGGAGACAAACCCCTGCCCCGAGGAGCAGAAA 1572
      |||||
QY      356 GCCAGGCGACCTCGAACTTCCCGCAGATCAACCTGTGGCAGCGCCCTGTGTGAGCATCA 415
      |||||
Db      1573 GACAGGAACCTTAACTGACCTCAATCACTTTTGGCAGCGACCCCTTGTCTCAATAA 1632
      |||||
QY      416 AGTGGCGCGCGCAGATCAAGGAGGCCCTGTGGAACAACCGCGCCCGCAGCACCGTGTGG 475
      |||||
Db      1633 AAGTAGGGGGTCAGATAAAGGAGGCTCTCTTGGATACAGGAGCATGATACAGTATTAG 1692
      |||||
QY      476 AGGAGATCAGCTGCGCGCAAGTGGAGCCCAAGATGATCGGCGGCATCGCGCTTCA 535
      |||||
Db      1693 AAGAAATAAATTTGCCAGGAAATGGAAACCAAAATGATAGGAGGAATGGAGGTTTTTA 1752
      |||||
QY      536 TCAAGGTGCGCGCAGTACGACCAGATCCCTGATCGAGATCTGGGGAAGAGGCCATCGGCA 595
      |||||
Db      1753 TCAAGTAAAGACAGTATGATCAATATCTTATAGAAATTTTGGAAAGAGGCTATAGTA 1812
      |||||
QY      596 CCGTGTGATCGGCCCCACCCCGCTGAACATCATCGGCGGCAACATGTCGACCCAGCTGG 655
      |||||
Db      1813 CAGTATTAGTAGGACCTACACCTGTCAACATAATTGGGAGAAATATATTGGACCCAGCTTG 1872
      |||||
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QY 656 GTTCGACCTGAACTCCCATCAGCCCATCGAAGCCGTGCCCGTGAAGCTGAAGCCCG 715  
 Db 1873 GCTGCACTAATATTTTCCAAATTAGCTTATGAACTGTACAGATAAATTAAGCCAG 1932  
 QY 716 GATGAGACGCCCCAAGGTGAGCAAGTGGCCCTGATCCAGAGAAAGATCAAGGCCCTGA 775  
 Db 1933 GATGAGATGGCCCAAGGGTCAACAAATGGCCATTTGACAGAAAGAAAAAAGACATTAA 1992  
 QY 776 CCGCATCTGCAGAGATGAGAAAGAGAGGCAAGATCCAAAGATCGGCCCGGAGAAC 835  
 Db 1993 CAGCAATTTGTGAABAAATGGAABAAAGAGAAAAATTCAAAATTTGGCCCTGAGAAATC 2052  
 QY 836 CCTAACAACCCCCGTGTTCCATCAGAAAGAGACAGCAAGTGGCGCAAGCTGG 895  
 Db 2053 CATATTAACACTCCATATTTTGGCATTAAGAAAGACAGTACTTAAGTGAATAATTAAG 2112  
 QY 896 TGGATTCGCGAGGTGAACAAGCCGACCAAGACTTCGAGAGGTGACGCTGGGATTC 955  
 Db 2113 TAGATTTAGGGAACTCAATTAAGAACTCAGAGACTTTGGGAAAGTTCAATTAAGAAATAC 2172  
 QY 956 CCCACCCCGCGGCTGAAAGAAAGAAAGAGCGTGAACGCTGTGACGTGGCGAGAGCT 1015  
 Db 2173 CACACCCAGCGGGGTAAAAAAGAAAGAAAGTCAAGTACAGTACTGAGATGGGGAGATGCGT 2232  
 QY 1016 ACTTACGCGTCCCTGAGACAGAGACTTCGCAAGTACACCGCTTCACTCCAGCA 1075  
 Db 2233 ATTTCAGATTCCTTAAATGAAGCTTCAGAGAAATATACCTGATTCACATCCATAGTA 2292  
 QY 1076 TCAACAAGAGACCCCGGACCTCGCTACAGTACAAAGTGTGCGCCAGCGGCTGAAG 1135  
 Db 2293 TAAACATGAACACCTGGGATTAATGATCAATTAATGATGCTTCACAGGGATGAAG 2352  
 QY 1136 GCAGCCCCAGCATCTTCAGAGACAGATGACCAAGTCCGTGAGCCCTCCGCGCCGA 1195  
 Db 2353 GATCACCATCAATATTCAGAGTACAGATGATTAATAATCTTAAGCCCTTTAGAGACAAA 2412  
 QY 1196 ACCCGAGATGCTGATTAACAGTCAATGAGACAGCTGTGACGTGGCAGACGACTGGAGA 1255  
 Db 2413 ACCCAAAATGATTTCTATCATATATGATGATGATGATGATGATGATGATGATGATGAT 2472  
 QY 1256 TCGGCTCAGACCGCGCCCAAGATCGAGAGCTGCGAGACCTGCTGGCGTGGGCTTCA 1315  
 Db 2473 TAGGCAACACAGACAAAATAGAGATTAAGAACACCTATTTGAGATGGGATTTA 2532  
 QY 1316 CCACCCCGACAAAGAGACCAAGAGAGAGCCCTTCTGTGATGGGCTACAGACTGC 1375  
 Db 2533 CTACACCAAGACAGAGATCAGAAAGAGCCCTTCTTGTGATGGGATTAAGACTCC 2592  
 QY 1376 ACCCGACAGTGAACCTGTCAGCCCATGAGCTGCCGAGAGAGAGCTGAGCCGTGA 1435  
 Db 2593 ATCCGACAAATGACAGTACAGCTTAAAGCTCCAGAAAAGAGAGCTGAGCTGTCA 2652  
 QY 1436 ACACATCCAGAGAGTGGTGGGCAAGCTGAAGTGGGCGACAGATCAACCCCGGACCA 1495  
 Db 2653 ATGATATACAGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 2711  
 QY 1496 AGGTGCGCAGCTGTGCAAGCTGTCGCGGCGCCAGAGCCCTGACCAATCTGCCCC 1555  
 Db 2712 AAGTAAAGCAACTGTGTAACCTCTTAGGGGAGCCAAAGCACTAACAGCAATAGAACAT 2771  
 QY 1556 TGACCGAGAGAGCCGAGCTGAGCTGGCGGAGAACCGGAGATCTCTGGCGGAGCCCGTGC 1615  
 Db 2772 TGACTGAAGAGCAAAATTAAGATTGGAGAGAGAGGGAATTTTAAAGAACCAAGTAC 2831  
 QY 1616 ACAGGCTGTACTACACCCAGCAAGACCTGTGGCGAGATCCAGAGAGCGGCGACG 1675  
 Db 2832 ATGAGATATTTATTAATCAATCAAAAGCTTATAGCTGAATTAAGAAACAAAGGCGATG 2891  
 QY 1676 ACCAGTGAACCTTACCAATCTACAGAGAGCCCTTGAAGACCTGAAGACCGGCAAGTACG 1735  
 Db 2892 ACCAATGACATATCAAGTTTAAACCAAGACCATTCNAAAATCTGAAGAAAGAGATG 2951  
 QY 1736 CCAAGATGCGACCGCCCAACACCAAGACGATGAGACACTGACCGAGCCGTGCAAGAGA 1795

Db 2952 CAAAAATGAGAGACTGCCACACTAATGATGTAACAGTTAAACAGAGCGGTGCAAAAAA 3011  
 QY 1796 TCGCATGAGAGAGATGATGATCTGGGGCAAGACCCCCAATTCCGCTGCCATCCAGA 1855  
 Db 3012 TAGCCATGGAAGATGATGATGATGAGGAAAGATTCCTAAATTAGGCTACCCATTCAA 3071  
 QY 1856 AGAGACCTGAGAGACCTGGTGAACCGACTACTGCGAGGCGACCTGGATTCGCCAGATGG 1915  
 Db 3072 AAGAAACATGAGAGACATGTTGGACAGACTTATGGCAAGCACTGATTTCTGATGG 3131  
 QY 1916 AGTTGTGAACACCCCGCTGTAAGCTGTGTAACAGCTGGAAGAGAGAGCCCATCA 1975  
 Db 3132 AGTTGTGAATATCTCCCGCTAGTAAATATATGATGACAGCTGAGAAAGAACCCATAG 3191  
 QY 1976 TCGGCGCGAGACCTTTCTAGTGAACGCGCCGCAACCGGAGAACCAAGTCCGCAAG 2035  
 Db 3192 CAGAGCAAGAACTTACTATGATGATGAGAGCCCAATAGGGAACCTAAATTAGGAAAG 3251  
 QY 2036 CCGGCTACGTGACCGACCGGGGCGGCAAGATCGTAGCTGACCGAGACCAAC 2095  
 Db 3252 CAGGATATGTTACTGACAGAGGAGGCAAAAAATTTGTTACTTAACTGAACCAACATC 3311  
 QY 2096 AAGAGACCGAGCTGAGGCCATCCAGCTGCTGTCAGAGACAGCGGACCGAGGTAAACA 2155  
 Db 3312 AAAAGACTGATTAACAAGCAATTCAGTTAGCTTTGACAGGATTCAGAGATCAAGATTAACA 3371  
 QY 2156 TCGTACCGACAGCAGAGAGCGCCCTGGCATCAATCCAGGCCGACCCGACAAAGAGCA 2215  
 Db 3372 TAGTAAACAGACTCAAGATGATGATTAAGAAATCAACAGCAACCAAGATTAAGATGAT 3431  
 QY 2216 GCGAGCTGTGTAACAGATCATCGAGAGCTGATCAAGAGAGAGAGGTGATCTGAGCT 2275  
 Db 3432 CAGATTAATGATCAACAAATATAGAACAGTTGATTAAGAAAGAGTTTACTGTCAAT 3491  
 QY 2276 GGGTCCCGCCCAAGAGGATCGCGGCAACGAGCATGACAACTGTGTGAGCAAG 2335  
 Db 3492 GGGTACAGACACAAAGGATTTGAGAGAAATGAAGATGATTAATTTGTTAGTGTG 3551  
 QY 2336 GCATCCGCAAGGTGCTGTCTCGTGAACGGCATCCGAT 2370  
 Db 3552 GATTCAGAAAGTGTCTGTTCTAGATGAATGAT 3586

## RESULT 5

US-09-184-418C-11

; Sequence 11, Application US/09184418C

; Patent No. 6492110

; GENERAL INFORMATION:

; APPLICANT: Hahn, Beatrice

; APPLICANT: Gao, Feng

; APPLICANT: Shaw, George

; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN

; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1

; FILE REFERENCE: D6287

; CURRENT APPLICATION NUMBER: US/09/184,418C

; CURRENT FILING DATE: 1999-11-02

; NUMBER OF SEQ ID NOS: 112

; SEQ ID NO 11

; LENGTH: 8959

; TYPE: DNA

; ORGANISM: Human immunodeficiency virus type 1

; FEATURE:

; OTHER INFORMATION: isolate=94IN476.104; 138.1613; "gag";

; OTHER INFORMATION: 1418.4428; "pol"; 4361.4939; "vif"; 4879.5169; "vpr";

; OTHER INFORMATION: 5150.7782; "tat"; 5289.7938; "rev"; 5378.5638; "vpu";

; OTHER INFORMATION: 5556.8129; "env"; 8131.8754; "nef"

US-09-184-418C-11

Query Match 48.2%; Score 1189; DB 4; Length 8959;  
 Best Local Similarity 70.0%; Pred. No. 6.5e-187;  
 Matches 1627; Conservative 0; Mismatches 696; Indels 2; Gaps 2;

QY 46 AACATCCTGATGACGCGCAGCAACTTCAAGGGCCCCAAGCGCATCATCAAGTGTCTCAAC 105  
Db |||||  
1245 AACATAATGATGACGAGAGGCAATTTTAAAGGCCCTTAAAGAAATGTTTAAATGCTTCAAC 1304  
QY 106 TCGGCAAGAGGGCCACATTCGCCCGCACTGCGCGCCCCCGCCGCAAGAGGGCTGTGG 165  
Db |||||  
1305 TGTGCAAGGAAGGGCACATAGCCAGAAATGCGAGGCCCTTAGAAAAAGAGGCTGTGG 1364  
QY 166 AAGTGGCGCAAGGAGGGCCACAGATGAAGAGTGCACCGAGCGCCAGGCCCACTTCTTC 225  
Db |||||  
1365 AAATGTGGCAAGAGGACCAAAATGAAGACTGTACTGAGAGGAGGCTAA-TTTTTT 1423  
QY 226 CCGAGGACCTCGCCCTTCCCCAGGGCAAGGCCCGGAGTTCCTCCAGCGAGCAGAACCGC 285  
Db |||||  
1424 AGGGAAAAATTTGGCTTCCCAAGGGGAGGCGAGGGAATTTCTTCAAAAAGGCCAGA 1483  
QY 286 GCCAAGCCCCACACAGCCGAGCTGAGGTGCGGGCGGCAACCCCGCGAGCGAGGCC 345  
Db |||||  
1484 GCCAAGCCCCACACAGCGAGAGCTTCAGGTTCAAGGAGACAACCCCGCTCCGAAGCA 1543  
QY 346 GCGCGGAGCGCAGGGCACCTGAACTTCCCGAGATCACCTGTGGCAGCGCCCTTG 405  
Db |||||  
1544 GAGTGGAAAGACAGGAACCTTAACTTCCCTCAATCACTTTTGGCAGGACCCCTT 1603  
QY 406 GTGAGCATCAAGGTGGCGGCGCGAGATCAAGAGGCCCTGTGTGACACCGCGCGCACGAC 465  
Db |||||  
1604 GTCTCAATAAAGTAGGGGCGCAGATAAAGAGCTCTCTAGACACAGAGCAGATGAT 1663  
QY 466 ACCGTGCTGGAGAGATGAGCTGCCGCGCAAGTGGAAACCCCAAGATGATCGGGGATC 525  
Db |||||  
1664 ACAGTATTAGAAAGATAGCTTTGCCAGGAAGATGGAAACCAAAAATGATAGAGGAAT 1723  
QY 526 GCGCGCTTCATCAAGGTGGCGCAGTACGACAGATCCTCATCGAGATCTGCGGCAAGAG 585  
Db |||||  
1724 GAGGTTTTATCAAGTAGACAGATGATCAATACTTTATAGAAATTTGTGAAAAAG 1783  
QY 586 GCATCGGCACCGTGTGATTCGCGCCCAACCCCGTGAACATCATCGCGCGCAACATGCTG 645  
Db |||||  
1784 GCTATAGTACAGTATTAGTAGACCTACACCTGTCAACATAATTGGAAGAGATATGTTG 1843  
QY 646 ACCAGCTGGCTGACCTGAACTTCCCATCAGCCCATCGAGCCATCGAGACCTGCGCGTGAAG 705  
Db |||||  
1844 ACTAGCTTGGATGCACTCTAAATTTTCCAAATTTAGCCCCATTCAAACTGTACAGTAAAA 1903  
QY 706 CTGAAGCCCGCATGGAAGGCCCGCAGGTGAGCAGTGGCCCTGACCGAGCAGAGATC 765  
Db |||||  
1904 TTAAGCAAGGATGGATGGCCCCAAGGTAAACAGTGGCCATGACAGAGAGAAATA 1963  
QY 766 AAGGCCCTGAACCCCATCTCGAGGAGATGGAGAGGGGCAAGATCAACCAAGATCGGC 825  
Db |||||  
1964 AAAGCATTAACAGAAATTTGTAAGAAATTTGGAAGAAATGGAGAGGAAATTAACAAAATTTGG 2023  
QY 826 CCGGAGACCCCTACAAACCCCGTGTGCGCATCAAGAAAGGACAGCAACCAAGTGG 885  
Db |||||  
2024 CTGGAATTCATATAACACTCCAGTATTGCGCATTAAGAAAGGAGGACAGTACTAAGTGG 2083  
QY 886 CGCAAGCTGGTGACTTCCGCGAGCTGAACAAGCGCACCCAGGACTTCTGGAGGTGAG 945  
Db |||||  
2084 AGAAATAGTAGATTTAGGAGCTCAATAAGACTCAAGACTTTTGGGAAGTTCAA 2143  
QY 946 CTGGGCATCCCCACCCCGCCCTGAAGAGAGAGAGAGCGGTGACCGTGTGACGCTG 1005  
Db |||||  
2144 TTAGGAATACCAACCCAGCAGTTTAAAAAGAAATATCAGTACAGTACTGATGTG 2203  
QY 1006 GCGAGCCCTACTTACGCTGCCCTGGAGAGGACTTCGCAAGTACACCGCTTCAAC 1065  
Db |||||  
2204 GGGGATGCAATATTTTTCAGTTCCTTTAGATGAGGCTTCGGGAAATATATCTGCAATCAAC 2263  
QY 1066 ATCCCCAGCATCAACAACAGACCCCGGCATCCGCTACAGTACCAAGTGTGCCCCAG 1125  
Db |||||  
2264 ATACCTAGTATAAACAAATGAACACCAAGGATTAGATATCAATAATGTGTCTCCACAG 2323  
QY 1126 GGCTGGAAGGGCAGCCCCAGCATCTTCCAGAGCAGCATGACCAAGATCTCGAGGCCCTTC 1185

Db 2324 GGATGGAAGGATCACCAAGCAATATTCAGAGTAGCATGACAAAATCTTAGAGCCCTTT 2383  
QY 1186 CCGCCCCCAACCCCGAGATCGTGAATCTACAGATCATGAGCAGCTGTACTGGGCAGC 1245  
Db |||||  
2384 AGGGCACGAAATCCAAAAATAGTCTATCAATATATGGATGACTTGTATGTAGGTCT 2443  
QY 1246 GACCTGGAGATCGGCCAGCACCGGCCCAAGATCGAGGAGCTGCGCAAGCACCTGTGCGC 1305  
Db |||||  
2444 GACTTAGAAATAGGCGCATCATAGACAAAATAGAGGAGTTAAGAGCAGCATCTATTAAAG 2503  
QY 1306 TGGGCTTCACACCCCCGACAAAGAGCACAGAGGAGCCGCCCTTCTGTGGATGGGC 1365  
Db |||||  
2504 TGGGATTCACACACAGATAAGAAACATCAGAAAGAACCCCATTTCTTTGGATGGGG 2563  
QY 1366 TACGAGCTGACCCCGACAGTGGACCGTGCAGCCCATCGAGCTGCCCGAGAGAGAGC 1425  
Db |||||  
2564 TATGAATCCATCTCTGACAAATGGACAGTACAGCCTATAAAGCTGCCAGAAAAGATAGC 2623  
QY 1426 TGGACCGTGAAGACATCCAGAGCTGTGGCAAGCTGAACTGGCGCAGCCAGATCTAC 1485  
Db |||||  
2624 TGGACTGTCAATGATATACAGAGTTAGTGGAAAATTAACCTGGCAAGTCAGATTTAC 2683  
QY 1486 CCGGCATCAAGGTGCGCAGCTGTGCAAGCTGTGCGGCGCCCAAGGCCCTGACCGAC 1545  
Db |||||  
2684 CCAGGATTAAGTGAGGCAACTTTGTAACTCTTTAGGGGGCCAAAGCATAACAGAC 2743  
QY 1546 ATCTGCCCCGTGACCGAGGAGCGGAGCTGAGCTGGCGGAGAACCGGAGATCTGTGCGC 1605  
Db |||||  
2744 ATAGTACCACCTAACTGAAGAAGCAGATTAGAATTTAGCAGAGAACAGGGAATTTCAAAA 2803  
QY 1606 GAGCCGTGCGCGGCTGTACTACGACCCAGCAAGGACCTGTGGCGCGAGATCCAGAG 1665  
Db |||||  
2804 GAGCCAGTACATGGAGTATATTGACCCATCAAGAGCTTAACTAGCTGAATACAGAA 2863  
QY 1666 CAGGCCACGACCGTGCACCTACAGATCTACAGAGCCCTTCAAGAACCTGAGACC 1725  
Db |||||  
2864 CAGGGCATGACCAATGACATATCAAAATTTACCAAGAACCAATTCAAAAATCTGAAAAA 2923  
QY 1726 GGCAGTACGCCAAGATGGCAGCGCCACACACCAACAGCTGAAGCAGCTGACCGAGGCC 1785  
Db |||||  
2924 GGAAGTATGCAAAAATGAGGACTGCTCACACTAATGATGTAACACAGTTAACAGAGCA 2983  
QY 1786 GTGCAGAGAGATCGCCATGAGAGCATCTGTGCTGGGCAAGACCCCAAGTTCCGCTG 1845  
Db |||||  
2984 GTGCAAAAATAGCCNTAGAAAGCATAGTATAT-TGGAAAGACCCCTTAATTTAGACTA 3042  
QY 1846 CCATCCAGAAAGGAGCCTGGGAGACCTGTGGACCGACTACTGCGACGCCACCTGGATC 1905  
Db |||||  
3043 CCATCCAAAAAGAAACGTGGGAGACATGTTGGAAGACTATTGGCAGGCCACCTGGATT 3102  
QY 1906 CCGGAGTGGGAGTTGTTGAACACCCCGCCCTGTGGAAGCTGTGTAACAGTGGAGAG 1965  
Db |||||  
3103 CTGATTGGGAGTTGTTAATACCCCTCCCTTAGTAAAAATTTATGTACCGAGTAGAAAA 3162  
QY 1966 GAGCCCATCATCGCGCGCGAGACCTTCTACGTGGAGCGCGCGCAACCGCGAGACCAAG 2025  
Db |||||  
3163 GAAACCATAGTAGAGCAGAAACTTTCTATGTAGTGGAGCAGCTAATAGGAAACTAAA 3222  
QY 2026 ATCGCAAGGCGGCTACGTGACGACCGGGCGCGCAGAGAGATCGTGAGCCTGACCGAG 2085  
Db |||||  
3223 GTAGAAAAGCAGGGTATGTTTACTGACAGAGGAAGGACAGAAAATTTGTTCTTTAACTGAA 3282  
QY 2086 ACCACCAACAGAGACCGAGCTGAGGCCATCGAGTGGCCCTGCGAGCAGACGCGGAGC 2145  
Db |||||  
3283 ACAACAAATCAGAGACTGAATTGCGAGCAATTCAGCTAGCTTTTSCAAGATTCAGAAACA 3342  
QY 2146 GAGGTGAACATCTGACCGACAGCAGTACCCCTGGGCATCATCCAGCCCGCAGCCGAC 2205  
Db |||||  
3343 GAAGTAAACATAGTAAACAGCTTCAGTATGCAATTAGGAATCAATTCAGACACAAACAGAT 3402  
QY 2206 AAGACGAGAGCGAGCTGGTGAACACAGATCATCGAGCAGCTCATCAAGAGAGAGAGGTG 2265

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Db 3403 AAAAGTGAATCAGAGTTACTGCAACCAATTAATAGAACATTAATAACAAAGAAAGATC 3462
QY 2266 TACTGAGCTGGAGTCCCGCCCAAGAGGAGCATCGGCGGCAAGAGATGACAGCTG 2325
Db 3463 TATCTGTCTAGGCTACACGACATTAAGGAAATTGGAGGAAAGAACAAAGTATGATTA 3522
QY 2326 GTGAGCAAGGAGCATCGCAAGGTGCTTCTCTGACGCGCATCAT 2370
Db 3523 GTAAGTATGGAATTAGGAAAGTACTGTTCTAGATGGGATGAT 3567

RESULT 6
US-09-184-418C-4
; Sequence 4, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 4
; LENGTH: 8992
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; 139.1624; gag; 1690.4428; pol (N-terminus uncertain
; OTHER INFORMATION: 4373.4951; vif; 4891.5181; vpr; 5162.7801; tat; 5301.7958; rev;
; OTHER INFORMATION: 5403.5648; vif; 5566.8148; env; 8150.8773; nef
US-09-184-418C-4

Query Match 47.2%; Score 1165.6; DB 4; Length 8992;
Best Local Similarity 68.9%; Pred. No. 5.8e-183;
Matches 1627; Conservative 0; Mismatches 729; Indels 4; Gaps 2;

QY 14 TGGCCGAGGCCATGAGGCCAGGCCACAGGCCCAATCCTGATGAGCGAGACAACTCA 73
Db 1221 TGGCTGAAGCAATGAGGCCAAGTACAAACCAACCAATGATGAGAGAGCAATTTTA 1280
QY 74 AGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGAGCCCATCGCCGCA 133
Db 1281 AGGCGCAGAGAGATTTTAACTGTTTCACTGCGGCAAGAGAGACCTTAGCAGAA 1340
QY 134 ACTGCGCGCCCCCGCAAGAAAGGCTGCTGGAAGTGCAGAGAGGCGCACCAAGATGA 193
Db 1341 ATTGCAAGGCCCCCTAGAAAAAAGGGCTGTGGAAATGTGSAAGAGGAGCACCAAAATGA 1400
QY 194 AGGACTGACGAGAGGCCAGAGGCCCACTTCTCCGAGAGGACCTGCGCTTCCCGCAGGCA 253
Db 1401 AAGACTGACCTAGAGACAGGGCTAA-TTTTATTAAGGAAAAATTTGCGCTTCCAAAGGAG 1459
QY 254 AGGCCCCGAGTTTCCCGAGCGAGCAAAACCGCGCCCAAGGCCCCCAAGCCCGAGCT-- 311
Db 1460 AGGCCAGAAATTTTCCCGAGCGAGACTGAGGAGCCAGGCCCCCAAGAGAGAACTTT 1519
QY 312 -GCAAGTGGCGGCGCAAAACCCCGAGAGAGGCGGCGCCAGAGCCGCAAGGCACTTGA 370
Db 1520 GGAATGGGGGAAAGATAGCTTCTCTGAAACAGAGACAGAAAGACAGGAAACCTTTA 1579
QY 371 ACTTCCCCAGATCACTCCCTGAGGAGCGCCCTGAGTGAATCAAGAGGCGGCGCGCA 430
Db 1580 ATTTCCTCAATTACTCTTTTGGCAACAGCCCTTGTCAAGTAAATAATGAGAGTCAAC 1639
QY 431 TCAAGAGAGCCCTGCTGAGCAACCGGCGCGAGCAACCGTGTGAGAGAGATGACCTGC 490
Db 1640 TAAAGAGAGCTCTATTAGTACAGAGAGCATGATACAGTATTAGAAAGAAATTAATTTGC 1699
QY 491 CCGGCAATGGAAGGCCAAGATGATCGCGGCGATCGGCGGCTTCAAGAGTGCCTGCT 550

Db 1700 CAGAAAAATGGAACCAAAAAATGATAGGGGGAATTGGAGTTTATCAAGAGTAAACGT 1759
QY 551 ACGACAGATCTGATGAGATCTGCGGCAAGAGGCGCATCGGACCGTGTGATCGGCC 610
Db 1760 ATGATCAAAATCTTATGAAATTTGTGAAAAAAGGCTATAGGTACAGTATTAGTAGAC 1819
QY 611 CCACCCCGTATACATCATCGGCGCAACATCTGACCCCAAGCTGGGCTGCACCTGAACT 670
Db 1820 CTACATCTGTACATTAATTTGGAAGAAATATGTTGACCCGAGTTGTTGTTAACT 1879
QY 671 TCCCATGACCCCATGAGACCGTCCGTAAGCTGAAGCCCGGCAAGAGCGGCCCA 730
Db 1880 TTCCATTAATGCTTATGAGACTGTACAGAGCATTTAAAGCCAGGAATGATGGCCAA 1939
QY 731 AGGTGAAGAGTGGCCCTCGACGAGAGAGATCAAGGCCCTGACGCCCATCTGCGAG 790
Db 1940 AGGTTAAACAAATGSCCTTGAACAAGAAAAAATTAAGCAATTAAGCAAAAAATTTGTACAG 1999
QY 791 AGATGAGAAAGAGGAGGAGATCAACAGATCGGCCCGGAGAACCCCTACACAACCCCG 850
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Db 2060 TATTGCCATTAAGAAAGAGACAGTCTAAGTGAAGAAATTAAGTATTTCAAGGAGAC 2119
QY 911 TGAACAAAGCGCACCGAGCTTCTGGAGGCTGCACTGGGAGATCCCCACCCCGCGGC 970
Db 2120 TCAACAAAGAGACTCAAGACTTTTGGAGAGTCCATTAAGGATTAACACCCACAGGCT 2179
QY 971 TGAAGAAAGAGAGAGGCTGACCGCTGTGACGTTGGCGGAGCGCTACTTCAAGCTGCC 1030
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QY 1031 TGAAGAGAGACTTCCGAAAGTACACCGCTTCACTATCCAGCATCAACAGAGACC 1090
Db 2240 TAGATGAGAGCTTCAAGAAATATCTGATTCACCAATCACTAGATTAAGAAACAC 2299
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QY 1211 TCTACAGTATAGAGAGCTGTAAGTGTGAGCGAGCGACTGAGAGATGAGCGGCAAG 1270
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QY 1391 CCGTGCAGCCATGAGCTGCGCGAGAGAGAGTGAAGCTGTAAGAGCATCAAGAAC 1450
Db 2600 CAGTACAACTTATCACTGCGCAAGAAAGATGACTGAGCTGTCAATGATATACAGAGT 2659
QY 1451 TGTGTGGGAGAGCTGAATGAGGCGCAGCGAGATCTACCCCGGATCAAGGTGAGCGAGCT 1510
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QY 1511 GCAAGCTGCTGCGGCGCGCAAGGCTTGAACCAATCTGACCTTGAACCGAGAGGCGG 1570
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Db 976 ATTTCAGAGAACTTAATAGAGAACTCAGACTTCCTGGGAACTTCAATTAGAAATACCAC 1035  
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 Db 1156 ACAATGAGACACCAAGGATTGATATCAATGATGCTTCCACAGGATGGAAGAT 1215  
 QY 1139 GCGCCAGCATCTTCAGAGCAGCATGACCAAGATCCTGAGGCCCTCCGCGCCGCAAC 1198  
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 Db 1276 CAGACATAGTTATCTATCAATACATGATGATTTGTATGATGATCTGACTTGAATAG 1335  
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 Db 1636 CAGAAAGAGAGAGCTGAGCTGGCGAAGAACCAAGGATCTTAAAGAACCAAGTACATG 1695  
 QY 1619 GCGTGTACTACAGATCCCGCAAGAGCTGTGGCCGAGATCCAGAAAGAGGCGCACGACC 1678  
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 QY 1679 AGTGAAGCTTACAGATCTACAGAGAGCCCTCAAGAACTTGAAGACCGGCAAGTACGCA 1738  
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 Db 1816 GAAATGAGGGGTGCCACACTATATGTAACAAATTAACAGAGGCAAGTGCAGAAATTA 1875  
 QY 1799 CCATGAGAGAGATGTGATCTGGGGCAAGACCCCAATTCGCTGCTGCCATCCAGAAAG 1858  
 Db 1876 CCAAGAAAGATGATATATAGGAGAAAGACTCTCAATTTTAACTGTCCATACAAAGG 1935  
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 Db 1936 AAAATGAGAAACATGTGTGACAGATTTTGGCAAGCCACTGATTTCTAAGTGGAGT 1995  
 QY 1919 TCGTGAACACCCCTGCTGTGTGAACTGTGTACAGCTGGAAGAGAGCCCATCATCG 1978  
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 Db 2356 TACAGACACCAAGAGATTTGAGAGAAATGACAAAGTAAATTAATGCTGAGTGA 2415  
 QY 2339 TCGCAAGTGTCTGTCTTCTGAGCGCATCGAT 2370  
 Db 2416 TCAGAAAGTACTATTTTATGATGAGATAGAT 2447

RESULT 8  
 US-09-117-217-9  
 ; Sequence 9, Application US/09117217  
 ; Patent No. 6221578  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERTOGS, Kurt  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/117, 217  
 ; CURRENT FILING DATE: 1998-07-24  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 9  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (334)..(489)  
 ; OTHER INFORMATION: gag p6 (52 aa)  
 ; US-09-117-217-9

Query Match 45.8%; Score 1132; DB 3; Length 2601;  
 Best Local Similarity 68.5%; P-Id. No. 1,7e-177;  
 Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;  
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 QY 71 TCAAGGCGCCCAAGCGCATCATCAAGTGTCTTCACTGCGGCAAGAGGCGCACTCGCCC 130  
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 QY 251 GCAAGCGCGGAGTTCCCGAGGACAGAACCGCGCAACAGCCCAACGAGCGGAGC 310

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Db TGCAGTGGGGTAGAGCAACAATCCCTCCAGAGAGGAGCGGATAGACAGGAA 435  
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Qy AGATGAGCCTGCGCGGAGAGTGGAGCCCAAGATGATCGCGGCGATCGCGGCTTCATCA 538  
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Qy ACCCGCGCGCTGAAGAGAGAGAGCGTGAACCGTCTGACCGTGGCGGCGACGCTACT 1018  
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Qy ACAACGAGACCCCGGCTCCGCTACAGTACAAAGTGTGCTCCCGAGGCTGGAGGCA 1138  
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Qy CCCCCGACAGAGCACCAGAGGAGGCCCTTCTGTGGATGGGCTACGAGCTGCACC 1378

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Qy ACATCCAGAACCTGTGGGCAAGTGAACCTGGCGCAGCAGATCTACCCCGCATCAAG 1498  
Db ACATACAGAAATTTAGTGGGAAATTTGAATTTGGCAAGTTCAGATTTACCAGGATTAAG 1575  
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Qy CCGAGGAGCGAGCTGGAGCTGGCCGAGAACCGGAGATCTCTGGCGAGCCCGTGGACG 1618  
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RESULT 9

US-09-117-217-11

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/ Sequence 11, Application US/09117217
/ Patent No. 6221578
/ GENERAL INFORMATION:
/ APPLICANT: de BETHUNE, Marie-Pierre
/ APPLICANT: HERTOGS, Kuit
/ APPLICANT: PUMELS, Rudi
/ TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
/ TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
/ FILE REFERENCE: 1377-125P
/ CURRENT APPLICATION NUMBER: US/09/117,217
/ CURRENT FILING DATE: 1998-07-24
/ NUMBER OF SEQ ID NOS: 15
/ SOFTWARE: Patent In Ver. 2.0
/ SEQ ID NO 11
/ LENGTH: 2601
/ TYPE: DNA
/ ORGANISM: HIV-HXB2
/ FEATURE:
/ NAME/KEY: CDS
/ LOCATION: (453)..(749)
/ OTHER INFORMATION: Protease
US-09-117-217-11

Query Match      45.8%; Score 1132; DB 3; Length 2601;
Best Local Similarity 68.5%; Pred. No. 1.7e-177;
Matches 1826; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

QY      14 TGGCCGAGGCCATGAGCCAGGCCACCA--GGGCCAACATCTGTATGACGCCAGCACT 70
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QY      71 TCAGGGCCCCAGGCGCATCATAGTCTTCAACGCGCGGCAAGAGGGGCCCATGCGCC 130
DB      137 TTGAGAACCAAGAAAGATTGTTAAAGTGTTCATATTGGCAAGAGGGCCACACGCCA 196
QY      131 GCACATGCGCGCCCCCGCCAGAAAGGGCTGCTGGAAGTCCGCGCAAGAGGGCCACCA 190
DB      197 GAATTTGACAGGGCCCCCTAGAGAAAGGGGCTTTGGAATGTGGAAGAGAGACCCAA 256
QY      191 TGAAGACTGACACCGAGCGCCAGGCCAATTCTTCCGCGAGGACTCTGGCTTCTCCCAAG 250
DB      257 TGAAGATTGTACTAGAGACAGAGCTAA-TTTTTTAAAGGAGATCTGGGCTTCTTACAG 315
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QY      1439 ACATTCAGAGCTGTGGGCGCAAGTGAATGAGGCGACGACGATCTACCCCGCATCAAG 1498
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QY      1499 TGCCCGAGCTGTGAACCTGTGCGCGCGCGCAAGCCCTGACGCAATCTGTGCCCTGGA 1558
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QY      1619 GCGGTGCTACAGCCCAAGAGACCTGGTGGCGCGAGTCCAGAGAGAGGCGCACGAGCC 1678
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QY      1679 AGTGAACCTTACAGATCTACAGAGAGCCTTCAAGAACTTGAACCGGCAAGTACGCCA 1738
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1876 CCACAGAAAGCATAGTAATATGSGGAAGACTCTTAATTTAAACTGCCCATCAAAAGG 1935  
1859 AGACCTGGGAGACCTGGTGACCGACTACTGGCAGGCCACCTGGATCCCGAGTGGGAGT 1918  
1936 AAACATGGGAACAATGGTGACAGAGTATTGGCAAGCCACTGATTCTCTAGTGGGAGT 1995  
1919 TGTGTACHACCCCCCTGGTGAAGCTGTGTGTACAGCTGGAGAGAGGCCATCATCG 1978  
1996 TTGTTAATACCCCTCCCTTAGTGAATATTATGTACAGTTAGAGAAAGAACCCATAGTAG 2055  
1979 GGGCCGAGACCTTCTACGTGAGCGCGCCCAACCGCGAGACCAAGATCGGCAAGCGCG 2038  
2056 GAGCAGAAACCTTCTATGTAGATGGGCGAGCTAACAGGGAGACTAAATTAGGAAAGCAG 2115  
2039 GCTACGTGACCGACCGGGGCGCGCAGAAAGATCGTGAGCCCTGACCGAGACCCCAACAG 2098  
2116 GATATGTTACTAATAGAGGAAGACAAAAGTTGTCTACCCCTTAAGTACACAAACAATCAGA 2175  
2099 AGACGAGCTGACGAGGCATCCAGCTGGCCCTGAGAGACGCGGACGAGGTGAACATCG 2158  
2176 AGACTAGTTACAAAGCAATTTATCTAGCTTTGAGGATTTGGGATTTAGAGTAAACATAG 2235  
2159 TGACCGACAGCAGTAGTACGCCCTGGGATCATCATCAGGCCAGCCGACCAAGAGCGAGCG 2218  
2236 TAACAGACTCACAAATGATGATTTAGGAAATCATTCAGACCAACAGATCAAGTGAATCAG 2295  
2219 AGCTGTGAACCCAGATCATCGACAGCTGATCAAGAGGAGAGTGTACCTGAGCTGGG 2278  
2296 AGTTAGTCAATCAATAATAGAGCAGTTAATAAAAAAGGAAAGGTTCTATCTGGCATGG 2355  
2279 TCCCGCCACACAGGCGATCGCGGCAACAGCAGATCGACAGCTGGTGAGCAAGGGCA 2338  
2356 TACCAGCACAAAGAAATGGAGGAAATGAACAAGTAGATAAATTAGTCAGTCTGGAA 2415  
2339 TCCGCAAGTGTGTCTTCCTGGACGGCATCGAT 2370  
2416 TCAGGAAGTACTATTTTAGATGGATAGAT 2447

RESULT 10  
US-09-117-217-13  
; Sequence 13, Application US/09117217  
; Patent No. 6221578  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kurt  
; APPLICANT: PAUWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; TITLE OF INVENTION: OF HUMAN HIV STRAINS  
; FILE REFERENCE: 1377-125P  
; CURRENT APPLICATION NUMBER: US/09/117,217  
; CURRENT FILING DATE: 1998-07-24  
; NUMBER OF SEQ ID NOS: 15  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 13  
; LENGTH: 2601  
; TYPE: DNA  
; ORGANISM: HIV-HXB2  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (750)...(2435)  
; OTHER INFORMATION: Reverse Transcriptase  
US-09-117-217-13  
Query Match 45.8%; Score 1132; DB 3; Length 2601;  
Best Local Similarity 68.5%; Pred. No. 1.7e-177;  
Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

14 TGGCCGAGGCCATGACGAGGCCACCA---GGCCAAACATCTCTGATGCGAGCGAGCAACT 70  
77 TGGCTGAAGCATGAGCCAGTAAACAATTGAGTACCTATATGATGCGAGAGGCAATT 136  
71 TCAGGCGCCCAAGCGCATCATCAAGTGTCTCAACTGCGCAAGAGGCGCCATCGCCC 130  
137 TTAGGAACCAAGAAAGATTGTTAAGTGTTCAAATTGTGCAAGAAAGAGGCCACAGCCA 196  
131 GCAACTGCGCGCCCGCCCGCAGAGAGGCTGTGGAAGTGCAGCAGAGAGGAGGCCACAGA 190  
197 GAAATTGACGGCCCTTAGGAAAAAGGGCTGTGGAATGTGGAAGAGGAGACACCAAA 256  
191 TGAAGACTGCCACCGAGCGCCAGGCCAACTTCTCGCAGAGACTGTGGCTTCCCGCAGG 250  
257 TGAAGATTGTACTAGAGAGAGGGCTAA-TTTTTTAGGGAAGATCTGGCTTCTTACAAG 315  
251 GCAAGCGCGGAGTTTCCCGAGCAGAGCAACCGGCCCAACAGCCCCACAGCGCGGAGC 310  
316 GGAAGGCCAGGGAAATTTCTTCAGAGCAGACCCAGAGCCAAAGCCCCACAGAGAGAGC 375  
311 TGCAGGTGCGCGG-----CGACAAACCCCGCAGAGCGCGCGCGCGCGAGCGCCAGGCA 364  
376 TTTAGGTCTGGGGTAGAGACAACTCCCTCTGAAAGCAGGAGCGGATAGACAAAGAA 435  
365 -----CCCTGAACTTCCCGCAGATCACTCTGTGCGAGCGCCCCCTGTGTGAGCATCAAG 418  
436 CTGTATCTTTTAACTTCCCTCAGGTCACTCTTTGSCAGACACCCCTCTGTCACAAATAAG 495  
419 TGGCGCGCAGATCAAGAGGCGCTGTGGACACCGCGCGCCGACGACACCTGCTGTGAGG 478  
496 TAGGGGGCACTAAAGGAAGCTCTATTAGATACAGAGCAGATGATACAGTATTAGAAG 555  
479 AGATGAGCTGCGCGGCAAGTGGAGCCCAAGATGATCGGGCGCATCGCGGCTTCATCA 538  
556 AAATGAGTTTGCAGGAAGATGGAAACCAAAATGATAGGGGGAATTTGAGGTTTATCA 615  
539 AGGTGCGCAGTACGACAGATCTCTGATCGAGATCTGGGGCAAGAGGCCATCGGCAACCG 598  
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599 TGTGATCGGCCCAACCCCGTGAAACATATCGGGCGCAACATGTGACCCAGCTGGGCT 658  
676 TATTAGTAGGACCTACACTGTCAACATAATTGGAAGAAATCTGTGACTCAGATTGGTT 735  
659 GCACCTGAACTTCCCATCAGCCCATCGAGACGCTGCCGCTGAGCTGAGAGCCCGCA 718  
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796 TGGATGGCCCAAAAGTTAAACATGGCCATTGACAGAGAGAAATAAAGCATTAGTAG 855  
779 CAATCTGGAGAGATGGAGAGGAGGCAAGATCAACAAGATCGGCCCGCGAGAACCCCT 838  
856 AAATTTGTACAGAGATGGAAAAGGAGCGAAAATTTCAAAAATTTGGGCTGAAAAATCCAT 915  
839 ACAACACCCCGTGTTCGCCATCAGAGAGAGGAGCAGCACCAAGTGGCGCAGCTGGTGG 898  
916 ACAATCTCCAGTATTTGCCATAAAGAAAAAGACAGTACTAAAATGGAGAAAATTAGTAG 975  
899 ACTTCGCGAGCTGAACAAGCGCACCCAGGACTTCTGGGAGGTGCGAGCTGGGCATCCCC 958  
976 ATTTTCAGAGAACTTAATAAGAGAACTCAAGACTTCTGGGAAGTTCAATTAGGAATACCAC 1035  
959 ACCCGCGCGCTGAAGAAAGAGAGCGGTGACCGTGTGACGCTGGCGCAGCGCTACT 1018  
1036 ATCCCGCAGGCTTAAAAAAGAAAAATTCAGTAAACAGTACTGATGTGGTGTGATGATATT 1095  
1019 TCAGGCTGCCCTGAGCAGGAGACTTCCGCAAGTACACCGCTTACCATCCCCAGCATCA 1078  
1096 TTTCACTTCCCTTAGATGAAGACTTCAGGAAGTACTGCACTTTACCATATCCTAGTATAA 1155  
1079 ACAACGAGACCCCGGCATCCGCTACCAAGTACAGTACAAGCTGCTCCCCCAGGGCTGGAAGGCA 1138

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Db      1156 ACAATGAGACACCGAGGATTAGATACAGTATGCTCCACAGGATGAAAGAT 1215
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QY      1199 CCGAGATCGTGTACTACAGTACATGAGCAGCTGTGAGTGGGACGAGCTGAGATCG 1258
Db      1276 CAGAGCTAGTATCTATCAATACATGAGATTTTGATATGAGATCTGACTTAAATAG 1335
QY      1259 GCCAGACCGCCGCAAGATCGAGAGCTGCGCAAGACCTGCTGCGTGGGCTTACCA 1318
Db      1336 GGCACGATGAAACAAAATAGAGAGCTGAGACAAACATCTGTGAGGTGGGACTTACA 1395
QY      1319 CCCCCGACAGAAGACACAGAGAGGAGCCCCCTTCTGTGATGAGGCTACAGAGCTGCAC 1378
Db      1396 CACCGACAAAACAAATCAGAAAACCTCCATCTCTTGGATGGGTATGAACTCCATC 1455
QY      1379 CCGACAGTGAACCGTGCAGGCCATCGAGCTGCCAGAGAGAGAGAGCTGACCTGAAAG 1438
Db      1456 CTGATTAATGACAGTACAGCTTATAGTCTGCGAGAAAAGACAGCTGAGCTGCATAG 1515
QY      1439 ACATCAGAAAGCTGTGGGCAAGCTGAACTGGGCGACGACATCTAACCCCGCATCAAG 1498
Db      1516 ACATCAGAAAGTATGTGGGAAATTTGAATTGGGCAAGTCAGATTTACCGAGGATTAAG 1575
QY      1499 TGCGCAGCTGTGACAGCTGCTGCGCGGCGCAAGGCCCTGACCGACATCGCGCCCTGA 1558
Db      1576 TAAAGCAATTAATGTAATCTCTTAAGAGAACCAAGCACTAACAGAGTAAATACACATP 1635
QY      1559 CCGAGAGAGCCGAGCTGAGCTGAGCGCGAAGACCGCGAGATCTCTGCGAGCCCTGACG 1618
Db      1636 CAGAGAGAGAGCTAGAGCTGAGCAAGAAAACAGAGAGATCTTAAAGAACAGATCATG 1695
QY      1619 GCGTGTACTAGACCCCAAGAGACCTGTGTGCGGAGATCCAGAGAGAGGCGCAAGC 1678
Db      1696 GAGTGTATTAAGACCCATCAAAAGACTTAATAGCAAAATACAGAGAGAGGCGCAAGGCC 1755
QY      1679 AGTGAACCTACAGATCTACAGAGAGGCCCTTCAAGAACCTGGAAGCCGCGAAGTGCAG 1738
Db      1756 AATGACATATCAAAATTTATCAAGAGCCATTTAAAAATCTGAAAACAGAAAATATGCA 1815
QY      1739 AGATGCGACCGCCACACCAAGAGTGAAGCAGCTGACCGAGGCCGTGCGAAGATCG 1798
Db      1816 GAATGAGGGGTGCCACACTAATGATGTAACAAATTAACGAGGCAAGTGCAGAAAATA 1875
QY      1799 CCATGAGAGATCTGTATCTGGGCAAGACCCCAAGTTCCGCTGCTCCATCCAGAGG 1858
Db      1876 CCACAGAAAGCATAGTATATGGGAAAGACTCTCTAAATTTAACTGCCCATACAAAAG 1935
QY      1859 AGACCTGGAGACCTGTGAGACCGACTACTGCGCAGGCACTGATTCGCCAGTGGAGT 1918
Db      1936 AAACATGGGAAACATGCTGAGCAGAGTATGGCAGACCACTGAGTCTCTGATGGAGT 1995
QY      1919 TCGTGAACACCCCTCTGTGTGAAGCTGTGTACCAAGCTGAGAGAGAGCCCATCATCG 1978
Db      1996 TTGTAAATACCTCTCTCTAGTGAATATATGTAACCAATTAAGAAAGAACCCATAGTAG 2055
QY      1979 GCGCGAGACCTTCTAGCTGAGACGCGCGCCCAACCGGAGACCAAGTTCGGCAAGGCG 2038
Db      2056 GAGCGAAGACCTTCTATGTATGAGTGGGAGCTTAACAGGAGAACTTAAATTAAGAAAAGAG 2115
QY      2039 GCTACGTGACCGACCGGCGCGGAGAGATCTGTAGCTGACCGAGACCAACCGA 2098
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Db      2296 AGTATGTAATCAATATATATAGCAGATTAATTAATAAGAAAGAAAGTCTATCTGGCATGG 2355
QY      2279 TGCCCGCCCAAGGGCATGCGCGGCAACGAGCAGATGCAACAGCTGTGAGCAAGGCA 2338
Db      2356 TACCGACACAAAGAAATGAGAGAAATGAACAGTATGATTAATTAAGTCAAGTCTGAA 2415
QY      2339 TCCGAAAGTCTGTCTCTGAGCGCATCGAT 2370
Db      2416 TCAGGAAGTACTATTTTATGATGAATAGAT 2447

RESULT 11
US-09-735-487-7
; Sequence 7, Application US/09735487
; Patent No. 6528251
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERBOS, Kurt
; APPLICANT: PAUMERS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; TITLE OF INVENTION: OF HUMAN HIV STRAINS
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/735,487
; PRIOR FILING DATE: 2000-12-14
; PRIOR APPLICATION NUMBER: 09/117,217
; PRIOR FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(492)
; OTHER INFORMATION: gag Polyprotein
US-09-735-487-7

Query Match      45.8%; Score 1132; DB 4; Length 2601;
Best Local Similarity 68.5%; Pred. No. 1.7e-177;
Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

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 Db 496 TAGGGGGCACTAAAGGAAGCTCTATTAGATACAGGAGCAGATGATACAGTATTAGAG 555  
 QY 479 AGATGAGCCTGCCCGGCAAGTGAAGCCCAAGATGATCGCGCGCATCGCGGGCTTCATCA 538  
 Db 556 AANTGAGTTTGGCAGGAAGATGAACCAAAAATGATAGGGGAATTGGAGGTTTATCA 615  
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 QY 719 TGAACGCGCCCAAGGTGAAGCAGTGGCCCTGACCGAGGAGAGATCAAGGCCCTGACCG 778  
 Db 796 TGGATGGCCCAAGTTAAACAAATGGCCATTGACAGAGAAATAAAGCATTAGTAG 855  
 QY 779 CCATCTGGAGGAGATGGAGAAGAGGGCAAGATCACCAAGATCGGCCCGCGAAGCCCT 838  
 Db 856 AATTTGTACAGAGATGGAAGAGGAGCGAAATTTCAAAATTTGGCCCTGAATTCAT 915  
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 QY 1859 AGACCTGGGAGACCTGGTGGACCGCTACTGCGAGGCCACCTGGATCCCGAGTGGGAGT 1918  
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 QY 2099 AGACGAGCTGACGAGCATTCAGCTGGCCCTCAGGACAGCGGACGAGGTGAACATCG 2158  
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 Db 2356 TACCAGCACAAAGGAATTGGAGGAATGAACAAAGTAGATAAATTAGTCACTGCTGGAA 2415  
 QY 2339 TCCGCAAGTGTGTCTCTGGAGCGCATCGAT 2370  
 Db 2416 TCAGGAAGTACTATTTTAGATGAATAGAT 2447

RESULT 12

US-09-735-487-9  
 ; Sequence 9, Application US/09735487  
 ; Patent No. 6528251  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERTOGS, Kurt  
 ; APPLICANT: PAUMELS, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; TITLE OF INVENTION: OF HUMAN HIV STRAINS

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1 FILE REFERENCE: 1377-125P
2
3 CURRENT APPLICATION NUMBER: US/09/735,487
4
5 CURRENT FILING DATE: 2000-12-14
6
7 PRIOR APPLICATION NUMBER: 09/117,217
8
9 PRIOR FILING DATE: 1998-07-24
10
11 NUMBER OF SEQ ID NOS: 15
12
13
14 SOFTWARE: PatentIn Ver. 2.0
15
16 SEQ ID NO 9
17
18 LENGTH: 2601
19
20 TYPE: DNA
21
22 ORGANISM: HIV-HXB2
23
24 FEATURE:
25
26 NAME/KEY: CDS
27
28 LOCATION: (334)..(489)
29
30 OTHER INFORMATION: seq P6 (52 AA)
31
32 US-09-735-487-9

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Query March	45.8%;	Score 1132;	DB 4;	Length 2601;
Best Local Similarity	68.5%;	Pred. No. 1.7e-177;		
Matches 1626; Conservative	0;	Mismatches 730;	Indels 16;	Gaps 4;

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QY	71	TCAAAGGCCCAAGCCGATCATCAATGCTTCACTGCGGCAAGSAGSGCACATCCCC		130
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QY	131	GCAACTGCGCGCCCCCGCAGAAAGSCTGCTGAAAGTCGCGCAAGSAGSGCACCAAGA		190
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QY	479	AGATGAGCTTCCCGGCAAGTGAAGCCCAAGTATCGCGCGCATCGCGCGCTTCATCA		538
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QY	659	GCAACCTGAATTTCCCATTCAGCCCATGAGACCGTGCCTCGTGAAGTGAAGCCCGCA		718
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QY	719	TGAGACGCCCCAAGGTGAAGCAGTGGCCCCCTACCGAGAGAAAGATCAAGGCCCTGACG		778
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QY	779	CCATCTGGGAGAGATGGAGAGAGGCGCAAGATCACCAAGATCGGCCCTCCAGAACCTCT	838
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QY	959	ACCCGCGCGCTGAGAGAGAAAGACGAGACCGCTGCTGAGACGTGGGCGACGCTACT	1011
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QY	1019	TCAGCTGCCCCCTGGACGAGACTTCCGCAAGTACACCGCCCTTCCATCCGACATCA	1078
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QY	1079	ACAACGAGACCCCGGGGATCCGCTACAGATCAACGCTGCTCCGCCAGGGCTGGAGGCA	1133
Db	1156	ACAATGACACCCAGGGATTGATATCATGTAACAATGTGCTTCCAGAGGATGAAAAGAT	1211
QY	1139	GCCCCAGCATCTTCCAGACGACATGACCAAGATCTTGAGCCCTTCCGCGCCGCAACC	1198
Db	1216	CACGAGCATATTCCAAAGTAGCATGACAAATACTTAAAGCCTTTTAGAAAACAAAATC	1277
QY	1139	CCGAGATCGTATCTACCAATACATGACACCTGTACGTGGGACGACCTCGAGATCG	1256
Db	1276	CAGCATATGTTATCTATCAATACATGATGATTTGTATGTAGATCTTACCTTAGAAATNG	1333
QY	1259	GCCAGCACCGCGCAAGATCGAGAGCTGCGCAACACCTGCTGGCTGGGGCTTCAACA	1311
Db	1336	GGCAGCATAGAACAAAAATTAGAGAGCTGAGACACACTCTGTTAGGCTGGGACCTTACCA	1399
QY	1319	CCCCCGACAAGACCCAGAAAGAGCCCCCTTCTGTGTGATGGGCTACGAGCTGACCC	1378
Db	1396	CACCAACAAAAACATCAGAAAAACCTCCATTCCTTTGATGGGTATGAACTCCATC	1455
QY	1379	CCGACAAGTGGACCGTGGACCCCATCCAGCTGCGCCGAGAAAGAGCTGGACCCGTGAAC	1433
Db	1456	CTGATTAATATGACACTACAGCTCTTAATGCTGTCCAGAAAAAGACGCTGGACTGTCAATG	1511
QY	1439	ACATCCAGAACTGTGGGCAAGCTGGAATCTGGGCGACGACATCTACCCCGCATCAAG	1498
Db	1516	ACATACAGAAATGATGGGGAATTTGAATTGGGCAAGTCAATTTACCAAGGATTAAG	1575
QY	1499	TGGCCAGCTGTGAACTGCTGTGGCGCGCCGAAGCCCTGACCGACACTGTGCCCTTGA	1556
Db	1576	TAAAGCATTTATGTPAACTCCTTTAGAGAGAACCAAGACCTAACAGAAATTAACCATPA	1633
QY	1559	CCGAGGAGGCGGAGCTGGAGCTGGCCGAGAACCCGAGATCTGTGGCGAGCCCGTGACG	1611
Db	1636	CAGAAAGACGAGACTTGAACCTGGCAGAAAAACAGAGATTTCTAAAAAGAACAGTACATG	1699
QY	1619	GCGGTACTACGACCCCGACAGGACTCTGGTGCAGATCCAGAAAGCAGGCGCACGACC	1678
Db	1696	GAGGTATTTATGACCCATCAAAAACCTTAATAGCAGAAATCAGAGACGAGGGCAAGGCC	1755
QY	1679	AGTGGACCTACCAATCTACAGGAGGCGCTCAAGAACCTGAGACCGGCAAGTACGCGCA	1733
Db	1756	AATGACATATCAAAATTTATCAGAGGCTTTTAAAAATCTGAAAAACGAAAAATTGCA	1811
QY	1739	AGATGCGACCGCCCAACAACAAGAGTGAAGCGCTGACCGAGGCGCTGCAGAAATCG	1798
Db	1816	GAAAGAGGAGTCCCAACATTAATGTTAAAAACAATTAACAGAGGCGAGTGCAAAAATPA	1875
QY	1799	CCAGTGGAGAGATCGTATCTGGGGGCAAGACCCCAAGTTCGCGCTGCTCCATCAAGAG	1858
Db	1876	CCAGAGAAAGATATGTAATATGGGGAAAAAGATCTCTTAATTTTAACTCCCATACAAAG	1935
QY	1859	AGACCTTGAGGACCTGTGTGACCGCATCTACGTGACGAGCAACCTGTGATCCCGAGTGGAGT	1918

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Db 1936 AATCATGGGAAACATGTGGACAGAGTATTGGCAAGCACCTGGATTCTCTGAGTGGGAGT 1995
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Db 1996 TTGTTAATACCCCTCCCTTAGTGAATATTGTTACCAAGTTAGAGAAAGAACCCATAGTAG 2055
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Db 2416 TCAGGAAAGTACTATTTTTAGATGGAATAGAT 2447

RESULT 13
US-09-735-487-11
; Sequence 11, Application US/09735487
; Patent No. 6528251
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Kurt
; APPLICANT: FAUWELS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/735,487
; PRIOR FILING DATE: 2000-12-14
; PRIOR FILING DATE: 09/117,217
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (453)..(749)
; OTHER INFORMATION: Protease
US-09-735-487-11

Query Match 45.8%; Score 1132; DB 4; Length 2601;
Best Local Similarity 68.5%; Pred. No. 1.7e-177;
Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

QY 14 TGCCGAGGCGCATGACCCAGGCCACCA---GGCCAAACATCTCTGATGCGGCGAGCAACT 70
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Db 197 GAAATTGCAAGGGCCCTTAGGAAAAAGGGCTGTTGGAAATGTGAAAGGAAGGACACCAAA 256
QY 191 TGAAGACTCGACCGGAGCGCCAGGCCAACTTCTTCGCGAGGACCTGGCCCTTCCCCAGG 250
Db 257 TGAAGATTGTACTGAGAGACAGGCTAA-TTTTITAGGGAAGATCTGGCCCTTCTTCAAG 315
QY 251 GCAAGCCCGCGAGTTCCTCCAGCAGACAGCCGCAACAGCCCAACAGCCCAACAGCGGAGC 310
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QY 311 TGCAGGTGCGCG- - - - -CGACAACCCCGCAGCGAGCGCGCGCGCGCGCGCAAGGCA 364
Db 376 TTAGGCTCTGGGTGAGAGCAACAACCTCCCTTCAGAAGCAGGAGCGCATAGACAAGAA 435
QY 365 - - - - -CCCTGAACTTCCCCAGATCACCTGTGGCGAGCGCCCTGTGGTGAAGCATCAAGG 418
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QY 419 TGGCGCGCCAGATCAAGGAGGCGCTCTGTGACACCGCGCGCGAGCAGCACCGTGTGGAGG 478
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QY 479 AGATGAGCCCTGCCCCCAGTGGAGCCCAAGATGATCGCGGCGCATCGCGGCTTCATCA 538
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 QY 1259 GCGACACCGCGCCCAAGATCGAGAGCTGGCAGACACCTGTGGCTGGGGCTTACCA 1318  
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 RESULT 14  
 US-09-735-487-13  
 ; Sequence 13, Application US/09735487  
 ; Patent No. 6528251  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERTOGS, Rudi  
 ; APPLICANT: PAUMELS, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/735,487  
 ; CURRENT FILING DATE: 2000-12-14  
 ; PRIOR APPLICATION NUMBER: 09/117,217  
 ; PRIOR FILING DATE: 1998-07-24  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 13  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (750)..(2435)  
 ; OTHER INFORMATION: Reverse Transcriptase  
 US-09-735-487-13  
 Query Match 45.8%; Score 1132; DB 4; Length 2601;  
 Best Local Similarity 68.5%; Pred. No. 1.7e-177;  
 Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;  
 QY 14 TGCGGAGGCGCATAGGCGAG 70  
 Db 77 TGCGTGAAG 136  
 QY 71 TCAAGGCGCCCAAGCGCATATCATAGTCTTCAACTCGCGGAGAGAGAGAGAGAGAGAG 130  
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RESULT 15  
 US-09-552-950-1  
 ; Sequence 1, Application US/09552950  
 ; Patent No. 6541248  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Oxford Biomedica (UK) Limited  
 ; TITLE OF INVENTION: Anti-Viral Vectors  
 ; FILE REFERENCE: 674524-2004  
 ; CURRENT APPLICATION NUMBER: US/09/552,950  
 ; CURRENT FILING DATE: 2000-04-20  
 ; NUMBER OF SEQ ID NOS: 22  
 ; SOFTWARE: Patent In Ver. 2.1  
 ; SEQ ID NO 1  
 ; LENGTH: 4307  
 ; TYPE: DNA  
 ; ORGANISM: Human immunodeficiency virus



US-09-552-950-1

Query Match 45.8%; Score 1132; DB 4; Length 4307;  
 Best Local Similarity 68.5%; Pred. No. 1.7e-177;  
 Matches 126; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

QY 14 TGGCCGAGCCATGAGCCAGGCCACCA--GCGCCAGATCTGTATGACGCGCAGCAACT 70  
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Job time : 123.609 secs

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GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on:      October 12, 2003, 12:35:37 ; Search time 436.728 Seconds
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              14669.518 Million cell updates/sec

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Perfect score: 2469
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Scoring table: IDENTITY NUC
                 Gapop 10.0 , Gapext 1.0

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Total number of hits satisfying chosen parameters:  3462098

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-Processing: Minimum Match 0%
                  Maximum Match 100%
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Database : Published Applications NA.\*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	2457	99.5	2457	12	US-10-190-435-45	Sequence 45, Appl
2	2434.6	98.6	2457	12	US-10-190-435-44	Sequence 44, Appl
3	2401.8	97.3	2445	12	US-10-190-435-43	Sequence 43, Appl
4	2394.8	97.0	3930	12	US-10-190-435-9	Sequence 9, Appl
5	2393.2	96.9	3930	12	US-10-190-435-10	Sequence 10, Appl
6	2393.2	96.9	3930	12	US-10-190-435-11	Sequence 11, Appl
7	2393.2	96.9	5184	12	US-10-190-435-58	Sequence 58, Appl
8	2362.8	95.7	5531	12	US-10-190-435-13	Sequence 13, Appl
9	2361.2	95.6	5537	12	US-10-190-435-14	Sequence 14, Appl
10	2361.2	95.6	5537	12	US-10-190-435-15	Sequence 15, Appl
11	2360.2	95.6	5145	12	US-10-190-435-12	Sequence 12, Appl
12	2349.4	95.2	3624	12	US-10-190-435-47	Sequence 47, Appl
13	2301.8	93.2	3607	12	US-10-190-435-48	Sequence 48, Appl
14	2283.6	92.5	3597	12	US-10-190-435-46	Sequence 46, Appl
15	2149.6	87.1	2472	12	US-10-241-009-32	Sequence 32, Appl
16	2121.2	85.9	2466	12	US-10-241-009-31	Sequence 31, Appl

17	2094.4	84.8	2460	12	US-10-241-009-30	Sequence 30, Appl
18	2093.4	84.8	3564	12	US-10-241-009-13	Sequence 13, Appl
19	2093.4	84.8	3564	12	US-10-241-009-14	Sequence 14, Appl
20	2092.8	84.8	4716	12	US-10-190-435-17	Sequence 17, Appl
21	2089	84.6	3999	12	US-10-241-009-9	Sequence 9, Appl
22	2087.4	84.5	3999	12	US-10-241-009-10	Sequence 10, Appl
23	2087.4	84.5	3999	12	US-10-241-009-11	Sequence 11, Appl
24	2087.4	84.5	5283	12	US-10-241-009-54	Sequence 54, Appl
25	2087.2	84.5	4713	12	US-10-190-435-59	Sequence 59, Appl
26	2086.8	84.5	3462	12	US-10-190-435-16	Sequence 16, Appl
27	2061.4	83.5	3735	12	US-10-241-009-34	Sequence 34, Appl
28	2054.4	83.2	5754	12	US-10-241-009-12	Sequence 12, Appl
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30	1977.8	80.1	3636	12	US-10-241-009-56	Sequence 56, Appl
31	1947.6	78.9	1971	12	US-10-190-435-49	Sequence 49, Appl
32	1932.8	78.3	3231	12	US-10-190-435-60	Sequence 60, Appl
33	1928	78.1	3234	12	US-10-190-435-51	Sequence 51, Appl
34	1920.8	77.8	1955	12	US-10-190-435-50	Sequence 50, Appl
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37	1862.2	75.4	3496	12	US-10-241-009-15	Sequence 15, Appl
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39	1808	73.2	1989	12	US-10-241-009-47	Sequence 47, Appl
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44	1758.4	71.2	3264	12	US-10-241-009-43	Sequence 43, Appl
45	1757.6	71.2	3252	12	US-10-241-009-42	Sequence 42, Appl

## ALIGNMENTS

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RESULT 1
US-10-190-435-45
; Sequence 45, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: EP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 45
; LENGTH: 2457
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2Polopt_C
US-10-190-435-45

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Best Local Similarity	100.0%;	Pred. No. 0;		
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QY 2347 GTGCTGTTCTGAGCGGATCGATGCGGCACTGATACCAAGTACATGACGACCTG 2406  
DB 2341 GTGCTGTTCTGAGCGGATCGATGCGGCACTGATACCAAGTACATGACGACCTG 2400  
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DB 2401 TACGTGGGAGCGGCGGCTTGGATCGATTAAGCTTCCCGGGCTAGCACCGGT 2457

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; Sequence 44, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEDEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: PP18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 44  
; LENGTH: 2457  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: p2Polopt.YM\_C  
US-10-190-435-44

Query Match 98.6%; Score 2434.6; DB 12; Length 2457;  
Best Local Similarity 99.6%; Pred. No. 0;  
Matches 2453; Conservative 0; Mismatches 4; Indels 6; Gaps 1;

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DB 1 GTGCGCCAGCCATGCGCGAGGCGCATGAGCCAGGCCAGCCAGCGCCAAACATCTGTATGCGAG 60  
QY 61 CGCAGCAACTTCAAGGGCCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCAAGAGGGC 120  
DB 61 CGCAGCAACTTCAAGGGCCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCAAGAGGGC 120  
QY 121 CATCTGCGCGCACTGCGCGCGCCCCCGCAGAGAGGGTGTGAGAGTGGCGCAAGGAG 180  
DB 121 CATCTGCGCGCACTGCGCGCGCCCCCGCAGAGAGGGTGTGAGAGTGGCGCAAGGAG 180  
QY 181 GGCACCCAGATGAAGACTGCAACCGAGCGCCAGGCCAATCTTCTCGCGAGGACCTGGCC 240  
DB 181 GGCACCCAGATGAAGACTGCAACCGAGCGCCAGGCCAATCTTCTCGCGAGGACCTGGCC 240  
QY 241 TTCCCCCAAGGCAAGCGCGCGAGTTTCCCGAGCGAGCAACCGCGCCAAACCGCCACC 300  
DB 241 TTCCCCCAAGGCAAGCGCGCGAGTTTCCCGAGCGAGCAACCGCGCCAAACCGCCACC 300  
QY 301 AGCCCGAGCTCAGTGTGCGCGCGCAACACCCCGCAGCGAGGCGCGCGCGAGCGCCAG 360  
DB 301 AGCCCGAGCTCAGTGTGCGCGCGCAACACCCCGCAGCGAGGCGCGCGCGAGCGCCAG 360  
QY 361 GGCACCTGAATTTCCCGCAGATCACTCTGCGAGCGCCCTCTGTGAGCATCAAGGTG 420  
DB 361 GGCACCTGAATTTCCCGCAGATCACTCTGCGAGCGCCCTCTGTGAGCATCAAGGTG 420  
QY 421 GCGGCGCAGATCAAGAGGCGCTGTGAGCAACCGCGCGCGAGCAACCGCTGTGAGGAG 480  
DB 421 GCGGCGCAGATCAAGAGGCGCTGTGAGCAACCGCGCGCGAGCAACCGCTGTGAGGAG 480  
QY 481 ATGAGCTTCCCGCGCAAGTGGAGGCCAAGATGATCGGCGGATCGGCGGCTTCAATCAAG 540  
DB 481 ATGAGCTTCCCGCGCAAGTGGAGGCCAAGATGATCGGCGGATCGGCGGCTTCAATCAAG 540

QY 541 GTGCGCCAGTACGACCAATCTGATCGAGATCTCGGCAAGAGCCCATCGGCAACCGTG 600  
DB 541 GTGCGCCAGTACGACCAATCTGATCGAGATCTCGGCAAGAGCCCATCGGCAACCGTG 600  
QY 601 CTGATCGGCGCCACCCCGCGTGAACATCATCGGCGCCAAACATGCTGACCCAGCTGGGCTGC 660  
DB 601 CTGATCGGCGCCACCCCGCGTGAACATCATCGGCGCCAAACATGCTGACCCAGCTGGGCTGC 660  
QY 661 ACCCTGAATCTCCCGCATCAGCCCATCGAGACCGTGGCGCGTGAAGCTGAAGCCCGCATG 720  
DB 661 ACCCTGAATCTCCCGCATCAGCCCATCGAGACCGTGGCGCGTGAAGCTGAAGCCCGCATG 720  
QY 721 GACGGCCCCAAGGTGAAGCAGTGGCCCTGACCCGAGGAGAGATCAAGGSCCTGACCGCC 780  
DB 721 GACGGCCCCAAGGTGAAGCAGTGGCCCTGACCCGAGGAGAGATCAAGGSCCTGACCGCC 780  
QY 781 ATCTCGAGGAGATGGAGAAGAGGCGCAAGATCACCAAGATCGGCCCGGAGAACCCCTAC 840  
DB 781 ATCTCGAGGAGATGGAGAAGAGGCGCAAGATCACCAAGATCGGCCCGGAGAACCCCTAC 840  
QY 841 AACACCCCGCTGTTCGCCATCAAGAGAGGACAGCAACAGTGGCGCAAGCTGGTGAC 900  
DB 841 AACACCCCGCTGTTCGCCATCAAGAGAGGACAGCAACAGTGGCGCAAGCTGGTGAC 900  
QY 901 TTCGCGAGCTGAACAAGCGCACCCAGGACTTCTGGGAGGTGCAGCTGGGCATCCCGCAC 960  
DB 901 TTCGCGAGCTGAACAAGCGCACCCAGGACTTCTGGGAGGTGCAGCTGGGCATCCCGCAC 960  
QY 961 CCGCGCGCTGAAGAAGAGAGCGTGCAGCTGACCGTGTGGAGCGTGGGCGAGCCTACTTC 1020  
DB 961 CCGCGCGCTGAAGAAGAGAGCGTGCAGCTGACCGTGTGGAGCGTGGGCGAGCCTACTTC 1020  
QY 1021 AGCGTGGCTTGGAGGAGCTTCCGCAAGTACACCGCTTACCATCCCGAGCATCAAC 1080  
DB 1021 AGCGTGGCTTGGAGGAGCTTCCGCAAGTACACCGCTTACCATCCCGAGCATCAAC 1080  
QY 1081 AACGAGACCCCGCGCATCCGCTACCAAGTACAAAGTGTGCGCCAGGCTGGAAGGCGAGC 1140  
DB 1081 AACGAGACCCCGCGCATCCGCTACCAAGTACAAAGTGTGCGCCAGGCTGGAAGGCGAGC 1140  
QY 1141 CCCAGCATCTTCCAGAGCAGCATCAAGATCTCTGGAGCGCTTCCGCGCGCGCAACCC 1200  
DB 1141 CCCAGCATCTTCCAGAGCAGCATCAAGATCTCTGGAGCGCTTCCGCGCGCGCAACCC 1200  
QY 1201 GAGATCGTATCTACCACTATGAGCACTGTACCTGTGGGCGAGCACTGGAGATCGGC 1260  
DB 1201 GAGATCGTATCTACCACTATGAGCACTGTACCTGTGGGCGAGCACTGGAGATCGGC 1260  
QY 1261 CAGCACCCCGCAAGATCGAGGCTGCGCAAGCACTGTGCTGGCTGGGCTTCAACCC 1320  
DB 1261 CAGCACCCCGCAAGATCGAGGCTGCGCAAGCACTGTGCTGGCTGGGCTTCAACCC 1320  
QY 1321 CCGAGCAAGAGCAACAGAGAGCGCCCTTCTGTGGATGGGTACAGTGCACCC 1380  
DB 1321 CCGAGCAAGAGCAACAGAGAGCGCCCTTCTGTGGATGGGTACAGTGCACCC 1380  
QY 1381 GACAACTGGACCGTGCAGCCCATGAGCTGCGGAGAGGAGCTGACCGTGAACGAC 1440  
DB 1381 GACAACTGGACCGTGCAGCCCATGAGCTGCGGAGAGGAGCTGACCGTGAACGAC 1440  
QY 1441 ATCCAGAGCTGTGGGCAAGCTGAATGGGCGCAGCGAGATCTACCCCGGATCAAGGTG 1500  
DB 1441 ATCCAGAGCTGTGGGCAAGCTGAATGGGCGCAGCGAGATCTACCCCGGATCAAGGTG 1500  
QY 1501 CGCCAGCTGTCAAGCTGCTCGCGCGCGCCAAAGSCCTTGACCGCATCTGTCGCCCTGACC 1560  
DB 1501 CGCCAGCTGTCAAGCTGCTCGCGCGCGCCAAAGSCCTTGACCGCATCTGTCGCCCTGACC 1560  
QY 1561 GAGAGGCGCGAGCTGGAGCTGCGCGAGAACCGCGAGATCTCTGCGGAGCGCCGCTGACGGC 1620  
DB 1561 GAGAGGCGCGAGCTGGAGCTGCGCGAGAACCGCGAGATCTCTGCGGAGCGCCGCTGACGGC 1620

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QY 1621 GTGTACTACGACCCCGACGAGGACCTGTGTGCGGAGATCCAGAGGAGGCCACGACGAG 1680
DB 1615 GTGTACTACGACCCCGACGAGGACCTGTGTGCGGAGATCCAGAGGAGGCCACGACGAG 1674
QY 1681 TGGACTTACGAGTCTTACGAGGAGGCCCTTCAAGAACTTGAAGACCGGCAAGTACCGCAAG 1740
DB 1675 TGGACTTACGAGTCTTACGAGGAGGCCCTTCAAGAACTTGAAGACCGGCAAGTACCGCAAG 1734
QY 1741 ATGCGGACCGCCCAACGACGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1800
DB 1735 ATGCGGACCGCCCAACGACGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1794
QY 1801 ATGAGAGGATCGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1860
DB 1795 ATGAGAGGATCGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1854
QY 1861 ACCCTGGAGACCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1920
DB 1855 ACCCTGGAGACCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1914
QY 1921 GTGACACACCCCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 1980
DB 1915 GTGACACACCCCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 1974
QY 1981 GCGGAGACCTTCTACGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2040
DB 1975 GCGGAGACCTTCTACGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2034
QY 2041 TACGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2100
DB 2035 TACGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2094
QY 2101 ACCGAGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2160
DB 2095 ACCGAGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2154
QY 2161 ACCGAGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2220
DB 2155 ACCGAGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2214
QY 2221 CTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2280
DB 2215 CTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2274
QY 2281 CCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 2340
DB 2275 CCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 2334
QY 2341 CCGGAGGAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2400
DB 2335 CCGGAGGAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2394
QY 2401 GACCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2460
DB 2395 GACCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2454
QY 2461 GGT 2463
DB 2455 GGT 2457

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RESULT 3
US-10-190-435-43
; Sequence 43, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF

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; FILE REFERENCE: PP.18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190.435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: Patent Ver. 2.0
; SEQ ID NO 43
; LENGTH: 2445
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2pol.opt.YMMW_C
US-10-190-435-43

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Query Match 97.3%; Score 2401.8; DB 12; Length 2445;
Best Local Similarity 99.2%; Pred. No. 0;
Matches 2438; Conservative 0; Mismatches 7; Indels 12; Gaps 2;

QY 7 GCCACCATGCGCGGAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 66
DB 1 GCCACCATGCGCGGAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 60
QY 67 AACTTCAAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 126
DB 61 AACTTCAAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 120
QY 127 GCCCGCACTGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 186
DB 121 GCCCGCACTGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 180
QY 187 CAGATGAAGAAGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 246
DB 181 CAGATGAAGAAGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 240
QY 247 CAGGCGAAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 306
DB 241 CAGGCGAAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 300
QY 307 GAGGTGCAAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 366
DB 301 GAGGTGCAAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 360
QY 367 CTGAACTTCCCGGAGATCACTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 426
DB 361 CTGAACTTCCCGGAGATCACTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 420
QY 427 CAGATCAAGAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 486
DB 421 CAGATCAAGAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 480
QY 487 CTGCGCGGCAAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 546
DB 481 CTGCGCGGCAAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 540
QY 547 CAGTGTGACGAGATCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 606
DB 541 CAGTGTGACGAGATCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 600
QY 607 GCGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 666
DB 601 GCGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 660
QY 667 AACTTCCCGATGAGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 726
DB 661 AACTTCCCGATGAGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 720
QY 727 CCGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 786
DB 721 CCGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 780
QY 787 GAGGAGATGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 846
DB 781 GAGGAGATGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 840

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QY 847 CCGGTGTTCCCATCAAGAAAGAGACAGACAAAGTGGCGCAAGCTGTGTGACTTCCGC 906
Db 841 CCGGTGTTCCCATCAAGAAAGAGAGACAGACAAAGTGGCGCAAGCTGTGTGACTTCCGC 900
QY 907 GAGCTGAACAAAGGACACCAAGACTTCTGGAGGTGCAGCTGGGCAATCCCAACCCCGCC 966
Db 901 GAGCTGAACAAAGGACACCAAGACTTCTGGAGGTGCAGCTGGGCAATCCCAACCCCGCC 960
QY 967 GGCCTGAACAAAGAGAGCGTACCGTGTGGAGCTGGGCGACGCTTACTTACGCGTG 1026
Db 961 GGCCTGAACAAAGAGAGCGTACCGTGTGGAGCTGGGCGACGCTTACTTACGCGTG 1020
QY 1027 CCGCTGGACGAGAGACTTCCGCAAGTACACCGCTTCAACCATCCCAAGCATCAACACGAG 1086
Db 1021 CCGCTGGACGAGAGACTTCCGCAAGTACACCGCTTCAACCATCCCAAGCATCAACACGAG 1080
QY 1087 ACCCCGGGATCGGTACAGATACAGTGTGCTGCCCGCAGGGCTGGAAGGCGAGCCCGACG 1146
Db 1081 ACCCCGGGATCGGTACAGATACAGTGTGCTGCCCGCAGGGCTGGAAGGCGAGCCCGACG 1140
QY 1147 ATCTTCCAGAGCAGCATGACCAAGATCTTGGAGCCCTTCGGCGCCGCAACCCCGAGATC 1206
Db 1141 ATCTTCCAGAGCAGCATGACCAAGATCTTGGAGCCCTTCGGCGCCGCAACCCCGAGATC 1200
QY 1207 GTGATCTACAGTACATGACGACCTGTAGCTGGGCGAGCGACCTGGAGATCGGCCAGCAC 1266
Db 1201 GTGATCTACCA-----GGCCCCCTGTAGCTGGGCGAGCGACCTGGAGATCGGCCAGCAC 1254
QY 1267 CCGGCCAAGATCGAGAGCTGCGCAAGCAGCTGCTGCGCTGGGGCTTACACACCCCGGAC 1326
Db 1255 CCGGCCAAGATCGAGAGCTGCGCAAGCAGCTGCTGCGCTGGGGCTTACACACCCCGGAC 1314
QY 1327 AAGAAGCACAGAAAGAGCCCTTCTGTGTGATGGGTACGAGCTGCACCCCGACAAAG 1386
Db 1315 AAGAAGCACAGAAAGAGCCCTTCTGTGCTTCTGCTCCAT-----CGAGCTGCACCCCGACAAAG 1368
QY 1387 TGAACCGTGCAGCCCATCGAGCTGCCCGAAGAGAGAGCTGGACCGTGAACGACATCCAG 1446
Db 1369 TGAACCGTGCAGCCCATCGAGCTGCCCGAAGAGAGAGCTGGACCGTGAACGACATCCAG 1428
QY 1447 AGACTGTTGGGAGCTGAATCTGGGCGAGCAGATCTACCCGGCATCAAGTGTGCCCGAG 1506
Db 1429 AGACTGTTGGGAGCTGAATCTGGGCGAGCAGATCTACCCGGCATCAAGTGTGCCCGAG 1488
QY 1507 CTGTGAAGCTGCTGCGCGCGCAAGGCCCTGACCGACATGCTGCTGCTGACCGAGGAG 1566
Db 1489 CTGTGAAGCTGCTGCGCGCGCAAGGCCCTGACCGACATGCTGCTGCTGACCGAGGAG 1548
QY 1567 GCCGAGCTGGAGCTGGCCGAGAACCGCGAGATCTTGGCGAGCCCGTGCACGCGCGTGTAC 1626
Db 1549 GCCGAGCTGGAGCTGGCCGAGAACCGCGAGATCTTGGCGAGCCCGTGCACGCGCGTGTAC 1608
QY 1627 TAGGACCCAGCAAGACCTGTGTGGCGGAGATCCAGAAGCAGGCGCCAGCACGAGTGACC 1686
Db 1609 TAGGACCCAGCAAGACCTGTGTGGCGGAGATCCAGAAGCAGGCGCCAGCACGAGTGACC 1668
QY 1687 TACAGATCTACAGAGCCCTTCAAGACCTGAAGACCGCGCAAGTACGCCAAGTGGCG 1746
Db 1669 TACAGATCTACAGAGCCCTTCAAGACCTGAAGACCGCGCAAGTACGCCAAGTGGCG 1728
QY 1747 ACCGCCACACCAAGCAGTGAAGCAGCTGACCGAGGCGGTGCAGAGATCGGCATGGAG 1806
Db 1729 ACCGCCACACCAAGCAGTGAAGCAGCTGACCGAGGCGGTGCAGAGATCGGCATGGAG 1788
QY 1807 AGCATGCTGATCTGGGGCAAGACCCCAAGTTCGGCTGCGCTGCCCATCCAGAAGGAGACTGG 1866
Db 1789 AGCATGCTGATCTGGGGCAAGACCCCAAGTTCGGCTGCGCTGCCCATCCAGAAGGAGACTGG 1848
QY 1867 GAGACCTGTGGACCGCACTACTGGCGGCCACCTGATCCCGAGTGGGAGTTCGTGAAC 1926
Db 1849 GAGACCTGTGGACCGCACTACTGGCGGCCACCTGATCCCGAGTGGGAGTTCGTGAAC 1908
QY 1927 ACCCCCCCTGTGTGAAGCTGTGTACCAGCTGGAGAGGAGGCCCATCATCGGCGCGGAG 1986
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Db 1909 ACCCCCCCTGTGTGAAGCTGTGTGTACAGCTGGAGAAAGAGCCCATCATCGCGCGCGAG 1968
QY 1987 ACCTTCTACGTGGAGCGCGCCCAACCGCGAGACCAAGATCGGCAAGCGCGCTACGCG 2046
Db 1969 ACCTTCTACGTGGAGCGCGCGCCCAACCGCGAGACCAAGATCGGCAAGCGCGCTACGCG 2028
QY 2047 ACCGACCGGGCGCGCGAGAAATCGTGAAGCTGTGACCGAGACCAACCAACAGAAAGCCGAG 2106
Db 2029 ACCGACCGGGCGCGCGAGAGATCGTGAAGCTGTGACCGAGACCAACCAACAGAAAGCCGAG 2088
QY 2107 CTGAGGCGCATTCAGCTGGCCCTGAGGACAGCGCGAGCGAGGTGAACATCTGTGACCGAC 2166
Db 2089 CTGAGGCGCATTCAGCTGGCCCTGAGGACAGCGCGAGCGAGGTGAACATCTGTGACCGAC 2148
QY 2167 AGCAGTACGCTGGGCGCATCATCAGCGCCGCGCGCAAGCGAGCGAGCGAGCTGGTG 2226
Db 2149 AGCAGTACGCTGGGCGCATCATCAGCGCCGCGCGCAAGCGAGCGAGCGAGCTGGTG 2208
QY 2227 AACAGATCATCGAGCAGCTGATCAAGAGAGAAAGTGTACTGTAGCTGGGTGCCCGGC 2286
Db 2209 AACAGATCATCGAGCAGCTGATCAAGAGAGAAAGTGTACTGTAGCTGGGTGCCCGGC 2268
QY 2287 CACAAAGGCGATCGCGCGCAACGAGCAGATCGAAGCTGTGAGCAAGGCGCATCCGCAAG 2346
Db 2269 CACAAAGGCGATCGCGCGCAACGAGCAGATCGAAGCTGTGAGCAAGGCGCATCCGCAAG 2328
QY 2347 GTGCTGTCTTGGAGCGGCATCGATCGCGGCATCGTACCTACGATACGATGACGACGCTG 2406
Db 2329 GTGCTGTCTTGGAGCGGCATCGATCGCGGCATCGTACCTACGATACGATGACGACGCTG 2388
QY 2407 TACGTGGGCGAGCGCGGCGCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 2463
Db 2389 TACGTGGGCGAGCGCGGCGCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 2445
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## RESULT 4

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US-10-190-435-9
; Sequence 9, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Eszrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: Patent in ver. 2.0
; SEQ ID NO 9
; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagCompPolmut_C
US-10-190-435-9
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Query Match 97.0%; Score 2394.8; DB 12; Length 3930;
Best Local Similarity 99.2%; Pred. No. 0;
Matches 2431; Conservative 0; Mismatches 7; Indels 12; Gaps 2;

QY 14 TGGCCGAGGCCATGAGCCAGGCCAGCCAGGCCCAACATCCTGATGAGCGCAGCACTTCA 73
Db 1487 TGGCCGAGGCCATGAGCCAGGCCAGGCCCAACATCCTGATGAGCGCAGCACTTCA 1546
QY 74 AGGCCCCCAAGCGCATCATCAAGTCTTCAATCGCGCAAGAGGGGCCACATCGCCCCGA 133
Db 1547 AGGCCCCCAAGCGCATCATCAAGTCTTCAATCGCGCAAGAGGGGCCACATCGCCCCGA 1606
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QY	134	ACTGCCGGCCCCCGGAAAGAGGGCTGTGGAAATGTGGGCAAGAGGGCCACAGATGA	193
Db	1607	ACTGCCGGCCCCCGGAAAGAGGGCTGTGGAAATGTGGGCAAGAGGGCCACAGATGA	1666
QY	194	AGGATGTACCAAGCGCCAGGCGCAACTCTTTCGGGAGAGACTGGCTTCCCGAGGACA	253
Db	1667	AGGATGTACCAAGCGCCAGGCGCAACTCTTTCGGGAGAGACTGGCTTCCCGAGGACA	1726
QY	254	AGGCCCGGAGTTCCCGACGAGCAACCGCGCCACAGCCCAACGCGCGAGCTGC	313
Db	1727	AGGCCCGGAGTTCCCGACGAGCAACCGCGCCCAAGCCCAACGCGCGAGCTGC	1786
QY	314	AGGTCGGGGGAGACACCCCGACGCGCGCGCGCGAGCGGACCGAGGGGCACTGAACT	373
Db	1787	AGGTCGGGGGAGACACCCCGACGCGCGCGCGCGAGCGGACCGAGGGGCACTGAACT	1846
QY	374	TCCCCCAATACCTCTGTGGACGCGCCCTGTGTAGCATCAAGTGGCGCGAGATCA	433
Db	1847	TCCCCCAATACCTCTGTGGACGCGCCCTGTGTAGCATCAAGTGGCGCGAGATCA	1906
QY	434	AGGAGGCCCTGTGGACACCGGCGCGGACACCGTGTGGAGAGATGAGCTTGC	493
Db	1907	AGGAGGCCCTGTGTGACACCGGCGCGGACACCGTGTGGAGAGATGAGCTTGC	1966
QY	494	GCAAGTGAGAACCCAAAGATGATCGCGCGCATCGCGCTTCATCAAGTGGCGCAGTACG	553
Db	1967	GCAAGTGAGAACCCAAAGATGATCGCGCGCATCGCGCTTCATCAAGTGGCGCAGTACG	2026
QY	554	ACCGAGTCTGTATCGAGATCTTGGCGGCAAGAGCCATTGGGACCGTGTGATCGGCCCA	613
Db	2027	ACCGAGTCTGTATCGAGATCTTGGCGGCAAGAGCCCATGGGACCGTGTGATCGGCCCA	2086
QY	614	CCCCGTTAACTCATTCGCGCGGCAACATGTACACCATCGGCGTGACCCGTGAACCTTC	673
Db	2087	CCCCGTTAACTCATTCGCGCGGCAACATGTACACCATCGGCGTGACCCGTGAACCTTC	2146
QY	674	CCATCAGCCCATTCGAGACCGTGCCTGGAACCTGAAACCCGCGCATGAGCGGCCCAAGG	733
Db	2147	CCATCAGCCCATTCGAGACCGTGCCTGGAACCTGGAACCCGCGCATGAGCGGCCCAAGG	2206
QY	734	TGAACCAATGGGCCCTTGAACCGAGAGAGATTTAAAGCCCTGACCGCCCATCTGCGAGAGGA	793
Db	2207	TGAACCAATGGGCCCTTGAACCGAGAGAGATTTAAAGCCCTGACCGCCCATCTGCGAGAGGA	2266
QY	794	TGGAGAAAGAGGGCAAGATTCACCAAGATCGGCCCGGAGAACCCCTTACAACAACCCCGTGT	853
Db	2267	TGGAGAAAGAGGGCAAGATTCACCAAGATCGGCCCGGAGAACCCCTTACAACAACCCCGTGT	2326
QY	854	TGCGCATCAAGAAAGAGCAGCACCAAGTGGCCGCAAGCTGTGSACTTCCGCGAGCTGA	913
Db	2327	TGCGCATCAAGAAAGAGCAGCACCAAGTGGCCGCAAGCTGTGSACTTCCGCGAGCTGA	2386
QY	914	ACAAACGCAACCAAGACTTCTGGAGGTGACGTGGGATCCCCACACCAGCCGAGCTGA	973
Db	2387	ACAAACGCAACCAAGACTTCTGGAGGTGACGTGGGATCCCCACACCAGCCGAGCTGA	2446
QY	974	AGAGAGAAAGAGCGTGAACCGTGTGACAGTGGCGAGCGCTACTTCAAGCGTGCCTTGC	1033
Db	2447	AGAGAGAAAGAGCGTGAACCGTGTGACAGTGGCGAGCGCTACTTCAAGCGTGCCTTGC	2506
QY	1034	ACGAGAGCTTCCGCAAGTACACCGGCTTCAACATCCCGAGCTTCAACAACAGAGACCCCG	1093
Db	2507	ACGAGAGCTTCCGCAAGTACACCGGCTTCAACATCCCGAGCTTCAACAACAGAGACCCCG	2566
QY	1094	GCATCGCTACCAATACACGTCGTCGCCCCAGGCTGAGAGGGGAGCCCCAGCATCTTTC	1153
Db	2567	GCATCGCTACCAATACACGTCGTCGCCCCAGGCTGAGAGGGGAGCCCCAGCATCTTTC	2626
QY	1154	AGAGAGAGATGACCAAGATCTCTGGAGCCCTTTCGGGCGCCGCAACCCCGAGATCGTGAAT	1213
Db	2627	AGAGAGAGATGACCAAGATCTCTGGAGCCCTTTCGGGCGCCGCAACCCCGAGATCGTGAAT	2686
QY	1214	ACCGATACATGACCAACTGTATCGAGGCGAGGACCTGAGATCGCGCAGACACCGCGCA	1273

Db	2667	ACCA-----GGCCCCCTGTGAGTGGGCAGCGACTTGGAGATCGGCACACCGCCCA	2740
QY	1274	AGATCGAGGAGCTGCGCAGACCTGTGTGGCTGGGGCTTCACACCCCGCAGACGAGC	1333
Db	2741	AGATCGAGGAGCTCGCAGACGACTGTGTGGCTGGGGCTTCACACCCCGCAGACGAGC	2800
QY	1334	ACCGAAGAGAGCCCCCTTCTCTGTGGATGGGCTACGAGCTGCACCCGACAGAGTGGACG	1393
Db	2801	ACCGAAGAGAGCCCCCTTCTCTGTGGATGGGCTACGAGCTGCACCCGACAGAGTGGACG	2854
QY	1394	TGCAGGCCATGAGCTGCCGAGAGAGAGAGTGGACCGTGAACGACATCCAGAGCTGG	1453
Db	2855	TGCAGGCCATGAGCTGCCGAGAGAGAGTGGACCGTGAACGACATCCAGAGCTGG	2914
QY	1454	TGGCAAGCTGAATGSGGCAGGCCAGTCTACCCCGGCATCAAGGTGCGCAGCTGTGCA	1513
Db	2915	TGGCAAGCTGAATGSGGCAGGCCAGTCTACCCCGGCATCAAGGTGCGCAGCTGTGCA	2974
QY	1514	AGCGTGCCTGGGCGCAGAGGCCCTGTACCGACATCGTGCCCTGACCGAGAGAGCCGAGC	1573
Db	2975	AGCGTGCCTGGGCGCAGAGGCCCTGTACCGACATCGTGCCCTGACCGAGAGAGCCGAGC	3034
QY	1574	TGAGCTGTGGCGAGAACCGCGAGATCTCTGGCGAGCCCGTGCACGCGCTGTACTACGAC	1633
Db	3035	TGAGCTGTGGCGAGAACCGCGAGATCTCTGGCGAGCCCGTGCACGCGCTGTACTACGAC	3094
QY	1634	CCAGCCAGAGACTTGTGTGGCTCGAGATTCAGAGAGCGAGGCCACGACCACTGACCTACAG	1693
Db	3095	CCAGCCAGAGACTTGTGTGGCTCGAGATTCAGAGAGCGAGGCCACGACCACTGACCTACAG	3154
QY	1694	TCTACAGAGAGCCCTTCAAGACCTGTGAAGACCGGCAGTACGCGCAATGCGACCGCC	1753
Db	3155	TCTACAGAGAGCCCTTCAAGACCTGTGAAGACCGGCAGTACGCGCAATGCGACCGCC	3214
QY	1754	ACACCAACGACGTGAGAGAGCTGACCGAGGCCGTGCGAAGATGCGCATGAGAGACTCG	1813
Db	3215	ACACCAACGACGTGAGAGAGCTGACCGAGGCCGTGCGAAGATGCGCATGAGAGACTCG	3274
QY	1814	TGATCTGGGGCAAGACCCCCCAAGTTCGCGCTGCCCATCCAGAGAGACCTGGAGAGCT	1873
Db	3275	TGATCTGGGGCAAGACCCCCCAAGTTCGCGCTGCCCATCCAGAGAGACCTGGAGAGCT	3334
QY	1874	GGTGACCGCACTACTGTGCGAGGCCACTTGATTCGCCAGTGGAGTTGTGAACACCCCC	1933
Db	3335	GGTGACCGCACTACTGTGCGAGGCCACTTGATTCGCCAGTGGAGTTGTGAACACCCCC	3394
QY	1934	CCCTGTGAACCTGTGTGATCCAGCTGTGAGAGAGGCCCATCATGCGGCGGAGACCTTCT	1993
Db	3395	CCCTGTGTAACTGTGTGATCCAGCTGTGAGAGAGGCCCATCATGTGGCGCGAGACCTTCT	3454
QY	1994	ACGTGAGACGGCGCGCCACCCGACAGACCAAGATCGGCAAGCGCGGCTAGGTGACCAAC	2053
Db	3455	ACGTGAGACGGCGCGCCACCCGACAGACCAAGATCGGCAAGCGCGGCTAGGTGACCAAC	3514
QY	2054	GGGGCTGGCAGAAATCGTGAAGCTGTACCCAGACCAACACAGAACCGAGCTGTGAGG	2113
Db	3515	GGGGCTGGCAGAAATCGTGAAGCTGTACCCAGACCAACACAGAACCGAGCTGTGAGG	3574
QY	2114	CCATTCAGAGTGGCCTGTGAGAGACGCGGCAAGCGAGTGAACATGTGTACCGACGACAGT	2173
Db	3575	CCATTCAGAGTGGCCTGTGAGAGACGCGGCAAGCGAGTGAACATGTGTACCGACGACAGT	3634
QY	2174	ACGCCCTGGGCATCATCCAGGCCACGCCCGACAGAGACGAGAGGAGCTGTGTGAACAG	2233
Db	3635	ACGCCCTGGGCATCATCCAGGCCACGCCCGACAGAGACGAGAGGAGCTGTGTGAACAG	3694
QY	2234	TCATCGACAGCTGATCAAGAGAGAGAGGTGATCTGAGCTGGGTGCCGCCCAAGG	2293
Db	3695	TCATCGACAGCTGATCAAGAGAGAGAGGTGATCTGAGCTGGGTGCCGCCCAAGG	3754
QY	2294	GCATTCGGCGGCAAGACAGATCGACAAAGTGTGTGACAAAGGACATCGCAAGGTGCTGT	2353

Db 3755 GCATCGGGGCAACGAGCAGATCGCAAGCTGCTGAGCAAGGCGCATCCGCAAGGTGCTGT 3814  
 QY 2354 TCCTGGAGGCGATCGATGGCGCATCGTGTATCTACAGTACATGACGACCTGTACGTGG 2413  
 Db 3815 TCCTGGAGGCGATCGATGGCGCATCGTGTATCTACAGTACATGACGACCTGTACGTGG 3874  
 QY 2414 GCAGCGGGGCGCTAGGATCGATTAAAGCTTCCCGGGGCTAGCACCGGT 2463  
 Db 3875 GCAGCGGGGCGCTAGGATCGATTAAAGCTTCCCGGGGCTAGCACCGGT 3924

RESULT 5  
 US-10-190-435-10  
 ; Sequence 10, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEGEDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; FILE REFERENCE: PPI18133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 10  
 ; LENGTH: 3930  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: GagCompPolmutAtt\_C  
 US-10-190-435-10

Query Match 96.9%; Score 2393.2; DB 12; Length 3930;  
 Best Local Similarity 99.2%; Pred. No. 0;  
 Matches 2430; Conservative 0; Mismatches 8; Indels 12; Gaps 2;

QY 14 TGGCCGAGGCATGAGCGAGCCACAGGCCAATCTGTATGAGCGCAGCACTTCA 73  
 Db 1487 TCGCCGAGGCATGAGCGAGCCACAGGCCAATCTGTATGAGCGCAGCACTTCA 1546

QY 74 AGGGCCCAAGCGCATCATCAAGTCTCACTGGGCAAGAGGGCCACATCGGCCCA 133  
 Db 1547 AGGGCCCAAGCGCATCATCAAGTCTCACTGGGCAAGAGGGCCACATCGGCCCA 1606

QY 134 ACTGCGCGCCCCCGCAAGAGGCTGTGTGAAGTGGCGCAAGAGGGGCCACAGATGA 193  
 Db 1607 ACTGCGCGCCCCCGCAAGAGGCTGTGTGAAGTGGCGCAAGAGGGGCCACAGATGA 1666

QY 194 AGGACTGACCGAGCGCAGGCCAATCTTCCGCGAGGACTGTGCGCTTCCGCCAGGCA 253  
 Db 1667 AGGACTGACCGAGCGCAGGCCAATCTTCCGCGAGGACTGTGCGCTTCCGCCAGGCA 1726

QY 254 AGGCCCGAGTTCCTCCAGCGAGAGAACCGCGCAACAGCCCAACAGCGCGAGCTGC 313  
 Db 1727 AGGCCCGAGTTCCTCCAGCGAGAGAACCGCGCAACAGCCCAACAGCGCGAGCTGC 1786

QY 314 AGGTGCGGGGCGACAACCCCGCAGCGAGGCGCGCGCGCGCGCGCGCGCGCGCGG 373  
 Db 1787 AGGTGCGGGGCGACAACCCCGCAGCGAGGCGCGCGCGCGCGCGCGCGCGCGG 1846

QY 374 TCCCGCAGATCACTGTGGCAGCGCCCTGTGTGAGCATCAAGTGTGGCGCGCAGATCA 433  
 Db 1847 TCCCGCAGATCACTGTGGCAGCGCCCTGTGTGAGCATCAAGTGTGGCGCGCAGATCA 1906

QY 434 AGGAGCCCTGTGACACCGCGCGCGAGCACCGTCTGTGAGAGATGAGCTGTGCCG 493  
 Db 1907 AGGAGCCCTGTGAGCTTCGCGCGCGCGAGCACCGTCTGTGAGAGATGAGCTGTGCCG 1966

QY 494 GCAAGTGAAGCCCAAGATGATCGCGCGCATCGGGGGCTTCATCAAGGTGCGCCAGTAGG 553

Db 1967 GCAGTGAAGCCCAAGATGATCGCGGCGATCGGGGGCTTCATCAAGGTGCGCCAGTAGG 2026  
 QY 554 ACCAGATCCTGATCGAGATCTGCGGCAAGAAGGCCATCGGCAACCGTGTGATCGGCCCA 613  
 Db 2027 ACCAGATCCTGATCGAGATCTGCGGCAAGAAGGCCATCGGCAACCGTGTGATCGGCCCA 2086  
 QY 614 CCCCCTGAAACATCATCGGCGCAACATGCTGACCCAGCTGGGCTGCAACCTGAACTTCC 673  
 Db 2087 CCCCCTGAAACATCATCGGCGCAACATGCTGACCCAGCTGGGCTGCAACCTGAACTTCC 2146

QY 674 CCATCAGCCCCCATCGAGACCGTGCCTGGAAGCTGAAGCCCGGATGACGCGCCCCAAGG 733  
 Db 2147 CCATCAGCCCCCATCGAGACCGTGCCTGGAAGCTGAAGCCCGGATGACGCGCCCCAAGG 2206

QY 734 TGAAGCAGTGGCCCTGACCGAGGAGAGATCAAGGCCCTGACCGCCCATCTGCGAGGAGA 793  
 Db 2207 TGAAGCAGTGGCCCTGACCGAGGAGAGATCAAGGCCCTGACCGCCCATCTGCGAGGAGA 2266

QY 794 TGGAGAAGGAGGCAAGATCAACAGATCGGCGCCCGAGAAACCTTACAACACCCCGGTGT 853  
 Db 2267 TGGAGAAGGAGGCAAGATCAACAGATCGGCGCCCGAGAAACCTTACAACACCCCGGTGT 2326

QY 854 TCGCCATCAAGAAGAAGGACAGCAAGTGTGCGCAAGCTGTGAGCTTCCGCGAGCTGA 913  
 Db 2327 TCGCCATCAAGAAGAAGGACAGCAAGTGTGCGCAAGCTGTGAGCTTCCGCGAGCTGA 2386

QY 914 ACAAGCGCACCCAGGACTTCTGGAGGTGACGTGGGCATCCCCACCGCGGCTTGA 973  
 Db 2387 ACAAGCGCACCCAGGACTTCTGGAGGTGACGTGGGCATCCCCACCGCGGCTTGA 2446

QY 974 AGAAGAAGAAGCGTGAACCGTGTGAGCTGGGCGAGCGCTTCTTCAAGCTGCCCCTGG 1033  
 Db 2447 AGAAGAAGAAGCGTGAACCGTGTGAGCTGGGCGAGCGCTTCTTCAAGCTGCCCCTGG 2506

QY 1034 ACAGGAGCTTCCGCAAGTACACCGCTTCAACATCCCGAGCATCAACACGAGACCCCG 1093  
 Db 2507 ACAGGAGCTTCCGCAAGTACACCGCTTCAACATCCCGAGCATCAACACGAGACCCCG 2566

QY 1094 GCATCCGCTACCACTACAAACCGTGTGCCCCAGGCTGGAAGGGCAGCCCCAGCATTTCC 1153  
 Db 2567 GCATCCGCTACCACTACAAACCGTGTGCCCCAGGCTGGAAGGGCAGCCCCAGCATTTCC 2626

QY 1154 AGAGCAGCATCAACAGATCTCTGAGCGCTTCCGGGCGCGCAACCCCGAGATCTGTATCT 1213  
 Db 2627 AGAGCAGCATCAACAGATCTCTGAGCGCTTCCGGGCGCGCAACCCCGAGATCTGTATCT 2686

QY 1214 ACCAGTACATGGAACGACCTGTACGTGGGCGAGCCTTGGAGATCGGCGAGCACCGCGCA 1273  
 Db 2687 ACCA-----GGCCCCCTGTACGTGGGCGAGCCTTGGAGATCGGCGAGCACCGCGCA 2740

QY 1274 AGATCGAGGAGCTGCGCAAGCCTGTGCTGGGCTTCCACCCCGCGAGCAAGAGC 1333  
 Db 2741 AGATCGAGGAGCTGCGCAAGCCTGTGCTGGGCTTCCACCCCGCGAGCAAGAGC 2800

QY 1334 ACCAGAGGAGCCCCCTTCTCTGTGAGTGGCTTACGAGCTGCAACCCCGAGTGGACCG 1393  
 Db 2801 ACCAGAGGAGCCCCCTTCTCTGTGAGTGGCTTACGAGCTGCAACCCCGAGTGGACCG 2854

QY 1394 TGCAGCCCATCGAGCTGCGCGAAGAGAGCTGGACCGTGAACGACATCCAGAGGCTGG 1453  
 Db 2855 TGCAGCCCATCGAGCTGCGCGAAGAGAGAGCTGGACCGTGAACGACATCCAGAGGCTGG 2914

QY 1454 TGGCAAGCTGAACTGGGCGCAGCCAGATCTACCCCGCAGATCAAGGTGCGCGAGCTGTGA 1513  
 Db 2915 TGGCAAGCTGAACTGGGCGCAGCCAGATCTACCCCGCAGATCAAGGTGCGCGAGCTGTGA 2974

QY 1514 AGCTGTGCGCGGCGCAAGGCTTGAACGACATCTGTGCCCCCTGAACGAGAGCGCGAGC 1573  
 Db 2975 AGCTGTGCGCGGCGCAAGGCTTGAACGACATCTGTGCCCCCTGAACGAGAGCGCGAGC 3034

QY 1574 TGGAGCTGGCGGAGAACCGCGAGATCTGCGCGAGCCCGTGCACGGGTGTACTACGACC 1633

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Db 3035 TGGAGCTGGCCGAGAAACCGCGAGATCTTCGCGGAGCCCGTGGACGGCTGTACTACGACC 3094
QY 1634 CGAGCAAGGACCTGGTGGCCGAGATCCAGAGAGAGGAGCCAGACAGTGGACTCCGGA 1693
Db 3095 CGAGCAAGGACCTGGTGGCCGAGATCCAGAGAGAGGAGCCAGACAGTGGACTCCGGA 3154
QY 1694 TCTACGAGAGCCCTTCAAGAACTTGAAGACCGGCAAGTACCGCAAGATGCGCACCGCC 1753
Db 3155 TCTACGAGAGCCCTTCAAGAACTTGAAGACCGGCAAGTACCGCAAGATGCGCACCGCC 3214
QY 1754 ACAACCAACGACTGAAGAGCTGACCGAGGCGCTGTGCAAGAGTCCGCATGAGAGCATCG 1813
Db 3215 ACACCAACGACTGAAGAGCTGACCGAGGCGCTGTGCAAGAGTCCGCATGAGAGCATCG 3274
QY 1814 TGATCTGGGGGCAAGACCCCAAGTCCGCTGCCATCCAGAGAGAGACTGGGAGACT 1873
Db 3275 TGATCTGGGGGCAAGACCCCAAGTCCGCTGCCATCCAGAGAGAGACTGGGAGACT 3334
QY 1874 GGTGACCGACTACTGTCGACAGGCGACCTGGATCCCGAGTGGAGTTCGTGAACACCCCC 1933
Db 3335 GGTGACCGACTACTGTCGACAGGCGACCTGGATCCCGAGTGGAGTTCGTGAACACCCCC 3394
QY 1934 CCTCTGTAACTGTGTGTACCAAGCTGTGAGAGAGAGCCCATCTCGGCGCCGAGACTTCT 1993
Db 3395 CCTCTGTAACTGTGTGTACCAAGCTGTGAGAGAGAGCCCATCTCGGCGCCGAGACTTCT 3454
QY 1994 ACGTGGACGGCGCCGCCCAACCGCGAGACCAAGATGGGCAAGGCGGCTACGTGACCGACC 2053
Db 3455 ACGTGGACGGCGCCGCCCAACCGCGAGACCAAGATGGGCAAGGCGGCTACGTGACCGACC 3514
QY 2054 GGGGCGCGCAGAAAGTGTGAGCTGACCGAGACCAACCAAGAGACCGAGCTGACAG 2113
Db 3515 GGGGCGCGCAGAAAGTGTGAGCTGACCGAGACCAACCAAGAGACCGAGCTGACAG 3574
QY 2114 CCATCCAGTGGCCCTCTGACAGAGCAGCGGAGAGAGTGAACATCTGTGACCGACAGCT 2173
Db 3575 CCATCCAGTGGCCCTCTGACAGAGCAGCGGAGAGAGTGAACATCTGTGACCGACAGCT 3634
QY 2174 ACGCCCTGGGCACTATCCAGGCGCCAGCCGACCAAGAGCAGAGCAGCTGTGAAACCGA 2233
Db 3635 ACGCCCTGGGCACTATCCAGGCGCCAGCCGACCAAGAGCAGAGCAGCTGTGAAACCGA 3694
QY 2234 TCATGACGAGCTGATCAAGAAAGAGAAAGTGTGACCTGAGCTGGTCCCGGCCCAAG 2293
Db 3695 TCATGACGAGCTGATCAAGAAAGAGAAAGTGTGACCTGAGCTGGTCCCGGCCCAAG 3754
QY 2294 GCATGGCGGCAACGAGAGATCGACAGAGCTGTGAGCAAGGCACTCCGCAAGGTCTGT 2353
Db 3755 GCATGGCGGCAACGAGAGATCGACAGAGCTGTGAGCAAGGCACTCCGCAAGGTCTGT 3814
QY 2354 TCTTGAAGCGCATCGATGGCGGCGCATCTGATCTACAGTACATGACAGACCTGTACGTGG 2413
Db 3815 TCTTGAAGCGCATCGATGGCGGCGCATCTGATCTACAGTACATGACAGACCTGTACGTGG 3874
QY 2414 GCAGGCGGCGCCCTTGAGATCGATTAAAGCTTCCCGGGGCTAGCACCGGT 2463
Db 3875 GCAGGCGGCGCCCTTGAGATCGATTAAAGCTTCCCGGGGCTAGCACCGGT 3924

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## RESULT 6

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US-10-190-435-11
; Sequence 11, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARRETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435

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; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagCmplPolmultina_C
US-10-190-435-11

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Query Match          96.3%; Score 2393.2; DB 12; Length 3930;
Best Local Similarity 99.2%; Pred. No. 0;
Matches 2430; Conservative 0; Mismatches 8; Indels 12; Gaps 2;

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QY 14 TGGCCGAGGCCATGATGACCGAGCCACAGCGCAATCTGATGACGCGCAACTTCA 73
Db 1487 TGGCCGAGGCCATGATGACCGAGCCACAGCGCAATCTGATGACGCGCAACTTCA 1546
QY 74 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGGCGGCAAGAGGGCCAGATTGCGCGCA 133
Db 1547 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGGCGGCAAGAGGGCCAGATTGCGCGCA 1606
QY 134 ACTGCGGCGCCCGCCGCAAGAGAGGCTGCTGAAGTGGCGCAAGAGGGCCACAGATGA 193
Db 1607 ACTGCGGCGCCCGCCGCAAGAGAGGCTGCTGAAGTGGCGCAAGAGGGCCACAGATGA 1666
QY 194 AGGACTGACCGAGAGCGGCGCAACTTCTTCCGCGAGAGACTGTGCTTCCCGCAGGCA 253
Db 1667 AGGACTGACCGAGAGCGGCGCAACTTCTTCCGCGAGAGACTGTGCTTCCCGCAGGCA 1726
QY 254 AGGCGCGGAGTTCCCGAGGAGAGAAACCGCGCAACAGCCCAACGCGCGGAGCTGC 313
Db 1727 AGGCGCGGAGTTCCCGAGGAGAGAAACCGCGCAACAGCCCAACGCGCGGAGCTGC 1786
QY 314 AGGTGCGGCGGAGAACCCCGCAGCGAGGCGCGCGCGCGCGCGCGCGCGCGCGCG 373
Db 1787 AGGTGCGGCGGAGAACCCCGCAGCGAGGCGCGCGCGCGCGCGCGCGCGCGCGCG 1846
QY 374 TCCCCCAGATATACCTCTGTGTGAGAGCGCCCTCTGTGTGAGATTAAGTGGCGCGAGATCA 433
Db 1847 TCCCCCAGATATACCTCTGTGTGAGAGCGCCCTCTGTGTGAGATTAAGTGGCGCGAGATCA 1906
QY 434 AGAGAGCCCTCTGTGAGAACCGCGCGCGAGCAACCTGTGTGAGAGATGAGCTGCGCG 493
Db 1907 AGAGAGCCCTCTGTGAGAACCGCGCGCGAGCAACCTGTGTGAGAGATGAGCTGCGCG 1966
QY 494 GCAAGTGAAGCCCAAGATGATCGGCGGATCGGCGCTTTCATCAAGGTGCGCAAGTAAG 553
Db 1967 GCAAGTGAAGCCCAAGATGATCGGCGGATCGGCGCTTTCATCAAGGTGCGCAAGTAAG 2026
QY 554 ACCGATCTGTGATGAGATCTGCGGCAAGAGGCAATCGGACCGTGTGATTCGCGCCCA 613
Db 2027 ACCGATCTGTGATGAGATCTGCGGCAAGAGGCAATCGGACCGTGTGATTCGCGCCCA 2086
QY 614 CCCCCGTGAACATCATCGGCGCGCAATGTGTGACCGAGCTGGCTGCACTTGAACCTTCC 673
Db 2087 CCCCCGTGAACATCATCGGCGCGCAATGTGTGACCGAGCTGGCTGCACTTGAACCTTCC 2146
QY 674 CCATCAGGCCCATGAGACCGTGTGAAAGCTGAAAGCCCGGCGATGGAAGCGGCCCAAG 733
Db 2207 TGAAGCACTGCCCCCTTACCGAGAGAGATCAAGGCCCTTGAACCGCATCTGCGAGGGA 2266
QY 734 TGAAGCACTGCCCCCTTACCGAGAGAGATCAAGGCCCTTGAACCGCATCTGCGAGGGA 793
Db 2267 TGAAGCACTGCCCCCTTACCGAGAGAGATCAAGGCCCTTGAACCGCATCTGCGAGGGA 853
QY 794 TGAAGAGAGAGGAGAGATCAACAGATCGGCGCGCGCAAGCCCTTACCAACACCCCGTGT 853
Db 2267 TGAAGAGAGAGGAGAGATCAACAGATCGGCGCGCGCAAGCCCTTACCAACACCCCGTGT 2326
QY 854 TCGGCATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 913

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Db 2327 TCGCCATCAAGAAAGGAGCAGACCAAGTGGCGCAAGCTGGTGGACTTCCGGAGCTGA 2386  
QY 914 ACAAGCGCACCCAGGACTTCTGGAGGTGCAGCTGGGCATCCCCACCCCGCGGCTCGA 973  
Db 2387 ACAAGCGCACCCAGGACTTCTGGAGGTGCAGCTGGGCATCCCCACCCCGCGGCTCGA 2446  
QY 974 AGAAGAAAGAGCGTGAACGCTGCTGGAGCGTGGGCGAACGCTTCTACGCGTGCCTGG 1033  
Db 2447 AGAAGAAAGAGCGTGAACGCTGCTGGAGCGTGGGCGAACGCTTCTACGCGTGCCTGG 2506  
QY 1034 AGAGGACTTCCGAAAGTACACCGCTTACCATCCCGAGCATCAACAGAGACCCCGC 1093  
Db 2507 AGAGGACTTCCGAAAGTACACCGCTTACCATCCCGAGCATCAACAGAGACCCCGC 2566  
QY 1094 GCATCCGCTACCAAGTACAAAGTCTGCTCCCGAGGGCTGGAGGGCAGCCCGAGCATCTCC 1153  
Db 2567 GCATCCGCTACCAAGTACAAAGTCTGCTCCCGAGGGCTGGAGGGCAGCCCGAGCATCTCC 2626  
QY 1154 AGAGCGATGACCAAGATCTTGGAGCCTTCCGCGCCCGCAACCCCGAGATCGTGATCT 1213  
Db 2627 AGAGCAGCATGACCAAGATCTTGGAGCCTTCCGCGCCCGCAACCCCGAGATCGTGATCT 2686  
QY 1214 ACCAGTACATGACGACCTGTAGTGGCAGCGACCTGAGATCGGCGAGCAGCCGCCA 1273  
Db 2687 ACCA-----GGCCCCCTGTAGTGGGAGGACCTGGAGATCGGCGAGCAGCCGCCA 2740  
QY 1274 AGATCGAGGAGCTGGCAAGCACCTGCTGGCTGGGGCTTACCACCCCGCAAGAACG 1333  
Db 2741 AGATCGAGGAGCTGGCAAGCACCTGCTGGCTGGGGCTTACCACCCCGCAAGAACG 2800  
QY 1334 ACCGAAAGAGCCCGCTTCTGTGGATGGGTACGAGCTGCACCCCGCAAGAGTGACCG 1393  
Db 2801 ACCGAAAGAGCCCGCTTCTGTGGATGGGTACGAGCTGCACCCCGCAAGAGTGACCG 2854  
QY 1394 TGCACCCATCGAGCTGCCGGAAGAGAGCTGGACCGTGAACGATCCAGACATCCAGAGCTGG 1453  
Db 2855 TGCAGCCCATCGAGCTGCCGGAAGAGAGCTGGACCGTGAACGATCCAGACATCCAGAGCTGG 2914  
QY 1454 TGGGCAAGCTGAACCTGGGCGAGCAGATCTACCCCGGCATCAAGGTGGCCAGCTGTGA 1513  
Db 2915 TGGGCAAGCTGAACCTGGGCGAGCAGATCTACCCCGGCATCAAGGTGGCCAGCTGTGA 2974  
QY 1514 AGCTGTGCGGCGCCAAAGGCTTACCGACATCGTGCCTGACCGAGGAGCGGAGC 1573  
Db 2975 AGCTGTGCGGCGCCAAAGGCTTACCGACATCGTGCCTGACCGAGGAGCGGAGC 3034  
QY 1574 TGGAGTGCAGAGAACCGGAGATCTCGGAGCGCGCTGCACGCGTGTACTAGAC 1633  
Db 3035 TGGAGTGCAGAGAACCGGAGATCTCGGAGCGCGCTGCACGCGTGTACTAGAC 3094  
QY 1634 CCAGCAAGGACCTGTGTGGCGGAGATCCAGAAGCAGGGCCACACCAAGTGGACCTACAGA 1693  
Db 3095 CCAGCAAGGACCTGTGTGGCGGAGATCCAGAAGCAGGGCCACACCAAGTGGACCTACAGA 3154  
QY 1694 TCTACAGAGCCCTTCAAGAACCTGAAGCAGCGMAAGTACGCAAGATGCGCACCGCC 1753  
Db 3155 TCTACAGAGCCCTTCAAGAACCTGAAGCAGCGMAAGTACGCAAGATGCGCACCGCC 3214  
QY 1754 ACACCAACGCTGAGCAGCTGACCGAGCGCTGCAGAGATCGCCATCGGAGAGCATG 1813  
Db 3215 ACACCAACGCTGAGCAGCTGACCGAGCGCTGCAGAGATCGCCATCGGAGAGCATG 3274  
QY 1814 TGATCTGGGGCAAGACCCCAAGTTCGGCTGCCATCCAGAAGGAGACCTGGAGACCT 1873  
Db 3275 TGATCTGGGGCAAGACCCCAAGTTCGGCTGCCATCCAGAAGGAGACCTGGAGACCT 3334  
QY 1874 GGTGAGCCGACTACTGGGAGGCACTTGATCCGAGTGGGAGTTCGTGAACACCCGCC 1933  
Db 3335 GGTGAGCCGACTACTGGGAGGCACTTGATCCGAGTGGGAGTTCGTGAACACCCGCC 3394  
QY 1934 CCTGTGTAGCTGTGGTACCACTGGAGAGGCCATCATCGGCGCGGAGACCTTCT 1993  
Db 3395 CCTGTGTAGCTGTGGTACCACTGGAGAGGCCATCATCGGCGCGGAGACCTTCT 3454

QY 1994 ACCTGGACGGGCGCCCAACCGCGAGACCAAGATCGGAAGCCCGGCTACGTGACCGACC 2053  
Db 3455 ACCTGGACGGGCGCCCAACCGCGAGACCAAGATCGGAAGCCCGGCTACGTGACCGACC 3514  
QY 2054 GGGGCGGCGAGAAGATCGTGAACCTGACCGAGACCAACCAAGAGACCGAGTGCAG 2113  
Db 3515 GGGGCGGCGAGAAGATCGTGAACCTGACCGAGACCAACCAAGAGACCGAGTGCAG 3574  
QY 2114 CCATCCAGCTGGCCCTGAGGACGAGCGAGGAGGTGAACATCGTGAACCGACGACT 2173  
Db 3575 CCATCCAGCTGGCCCTGAGGACGAGCGAGGAGGTGAACATCGTGAACCGACGACT 3634  
QY 2174 AGCCCTCGGCGATCATCCAGGCCCGAGCCGACCAAGAGAGAGCGAGTGGTGAACAGA 2233  
Db 3635 AGCCCTCGGCGATCATCCAGGCCCGAGCCGACCAAGAGAGAGCGAGTGGTGAACAGA 3694  
QY 2234 TCATCGAGAGCTGATCAAGAGGAGAGGTGTACTGAGTGGTGCCGCCCAAG 2293  
Db 3695 TCATCGAGAGCTGATCAAGAGGAGAGGTGTACTGAGTGGTGCCGCCCAAG 3754  
QY 2294 GCATCGGCGGCAACGAGCAGATCGAAGCTGGTGAAGAGGCGATCCGAGAGTGTCT 2353  
Db 3755 GCATCGGCGGCAACGAGCAGATCGAAGCTGGTGAAGAGGCGATCCGAGAGTGTCT 3814  
QY 2354 TCCTCGAGCGCATCGATGGCGCATCGTGTACTACAGTACATGGACGACCTGTACGTGG 2413  
Db 3815 TCCTCGAGCGCATCGATGGCGCATCGTGTACTACAGTACATGGACGACCTGTACGTGG 3874  
QY 2414 GCAGCGGCGGCTTAGGATCGATTAAAAGCTTCCCGGGCTAGCACCGGT 2463  
Db 3875 GCAGCGGCGGCTTAGGATCGATTAAAAGCTTCCCGGGCTAGCACCGGT 3924

## RESULT 7

US-10-190-435-58  
; Sequence 58, Application US/10190435  
; Publication NO. US20030143248A1

## GENERAL INFORMATION:

; APPLICANT: ZUR NEGBE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: P18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 58  
; LENGTH: 5184  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: TatRevNefgagQpolina C  
US-10-190-435-58

Query Match 96.9%; Score 2393.2; DB 12; Length 5184;  
Best Local Similarity 99.2%; Pred. NO. 0;  
Matches 2430; Conservative 0; Mismatches 8; Indels 12; Gaps 2;

QY 14 TGGCCGAGCCATGATGCCAGGCCACCAGGCCACCATCTGTATGCGGCGAGCACTTCA 73  
Db 2741 TGGCCGAGCCATGATGCCAGGCCACCAGGCCACCATCTGTATGCGGCGAGCACTTCA 2800  
QY 74 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGGGCAAGAGGGCCACATCGCCCGCA 133  
Db 2801 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGGGCAAGAGGGCCACATCGCCCGCA 2860  
QY 134 ACTGCGGCGCCCGCGCAAGAGGGCTCTGGAGTGGCAAGAGGGCGCCACCAAGATGA 193

Dh 2861 ACTGCGGCCCCCGCAAGAGGCGTGTGAGATGCGGCAAGGAGGGCCACGATGA 2920  
Qy 194 AGGACTGACCGAGGCGCAGGCCAATTCTTCCGGAGAGACTGTGCTTCCCGCAGGCA 253  
Dh 2921 AGGACTGACCGAGGCGCAGGCCAATTCTTCCGGAGAGACTGTGCTTCCCGCAGGCA 2980  
Qy 254 AGGCGCGGAGTTCCCGAGCGAGAGAACCGGCGCAACAGAGCCCAACAGCGCGAGCTGC 313  
Dh 2981 AGGCGCGGAGTTCCCGAGCGAGAGAACCGGCGCAACAGAGCCCAACAGCGCGAGCTGC 3040  
Qy 314 AGGTGCGGCGGCAAAACCCCGCAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373  
Dh 3041 AGGTGCGGCGGCAAAACCCCGCAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3100  
Qy 374 TCCCCAGATCACTCTGTGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 433  
Dh 3101 TCCCCAGATCACTCTGTGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3160  
Qy 434 AGGAGCGCTGCTGGACACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 493  
Dh 3161 AGGAGCGCTGCTGGACACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3220  
Qy 494 GCAAGTGAAGCCCAAGATGATGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 553  
Dh 3221 GCAAGTGAAGCCCAAGATGATGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3280  
Qy 554 ACCAGATCTGATCGAGATCTGCGGCGAGAGAGCCATCGGCGCGCGCGCGCGCGCGCG 613  
Dh 3281 ACCAGATCTGATCGAGATCTGCGGCGAGAGAGCCATCGGCGCGCGCGCGCGCGCGCG 3340  
Qy 614 CCCCCGTGAACATCATCGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 673  
Dh 3341 CCCCCGTGAACATCATCGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3400  
Qy 674 CCATAGAGCCCATCGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 733  
Dh 3401 CCATAGAGCCCATCGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3460  
Qy 734 TGAAGCAGTGGCGCTGACCGGAGAGAGATCAAGGCGCGCGCGCGCGCGCGCGCGCGCG 793  
Dh 3461 TGAAGCAGTGGCGCTGACCGGAGAGAGATCAAGGCGCGCGCGCGCGCGCGCGCGCGCG 3520  
Qy 794 TGGAGAGAGGCGCAAGATCACCAAGATGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 853  
Dh 3521 TGGAGAGAGGCGCAAGATCACCAAGATGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3580  
Qy 854 TCGGCATCAAG 913  
Dh 3581 TCGGCATCAAG 3640  
Qy 914 ACAAGCGACCCAGGACTTCTGGGAGGTGCACTGGGCAATCCCGACCCCGCGCGCTGA 973  
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Qy 974 AGAAGAGAGAGCGCTGACCGGTGCGAGAGTGGGAGAGCGCTTCACTTCAAGCGTGGCG 1033  
Dh 3701 AGAAGAGAGAGCGCTGACCGGTGCGAGAGTGGGAGAGCGCTTCACTTCAAGCGTGGCG 3760  
Qy 1034 ACGAGAGCTTCCGCAAGTACACCGCGCTTCAACATCCCGAGCATCAACAAGAGAGAGCG 1093  
Dh 3761 ACGAGAGCTTCCGCAAGTACACCGCGCTTCAACATCCCGAGCATCAACAAGAGAGAGCG 3820  
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Dh 3821 GCATCCGCTACAGTACAACTGTCTGCGCCAGGCGTGAAGGGGAGCGCCAGCATCTTCC 3880  
Qy 1154 AGAGAGAGATGACCAAGATCTTGGAGCGCTTCCGGCGCGCGCGCGCGCGCGCGCGCGCG 1213  
Dh 3881 AGAGAGAGATGACCAAGATCTTGGAGCGCGCTTCCGGCGCGCGCGCGCGCGCGCGCGCG 3940  
Qy 1214 ACCAGTACATGACGAGCTGTGAGGCGAGGAGCTGGAGATCGGCGCGCGCGCGCGCGCA 1273  
Dh 3941 ACCA-----GGCGCGCGCGTGTGAGGCGAGGAGCTGGAGATCGGCGCGCGCGCGCA 3994

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Dh 3995 AGATGAGAGAGCTGCGAGACACCTGTGCGCTGAGGCTTCAACACCCCGAGCAAGAAGC 4054  
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Dh 4109 TGGAGCCCATCGAGCTGCGCGAGAGAGAGCTGGAACCGTGAAGAGATCCAGAGAGCTGG 4168  
Qy 1454 TGGGCAAGCTGAATGGGCGCAGCAGATCAACCCGCGCATCAAGTGGCGAGCTGTGCA 1513  
Dh 4169 TGGGCAAGCTGAATGGGCGCAGCAGATCAACCCGCGCATCAAGTGGCGAGCTGTGCA 4228  
Qy 1514 AGCTGCTGCGGCGCGCAAGGCGCTGACCGACATCTGTGCGCGCGCGCGCGCGCGCGCG 1573  
Dh 4229 AGCTGCTGCGGCGCGCAAGGCGCTGACCGACATCTGTGCGCGCGCGCGCGCGCGCGCG 4288  
Qy 1574 TGGAGCTGCGGCGAGAACCGGAGATCTGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1633  
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Dh 4349 CCAAGCAAGGACTTGTGCGCGAGATCCAGAGAGGCGCAAGAGTGAACCTTACCGAGA 4408  
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Dh 4469 ACAACCAAGAGCTGTAAGACAGTGAACGAGGCGCGGAGAGATGCGCATGAGAGAGCATCG 4478  
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Dh 4529 TGAATCTGAGGCGAGAGGCGCGCAAGTTCGCGCTGCGCATCAAGAGAGAGCTTGGAGAGCT 4588  
Qy 1874 GGTGAGACGATTAATCTGCGAGGCGCACTGTGATCCCGAGGTGGAGATTTGTGAACACCGCC 1933  
Dh 4589 GGTGAGACGATTAATCTGCGAGGCGCACTGTGATCCCGAGGTGGAGATTTGTGAACACCGCC 4648  
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Dh 4649 CCTGTGTAAGCTGTGTAACAGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 4708  
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Dh 4709 ACGTGAACGCGCGCGCAACCGCGAGACCAAGATCGGCAAGGCGCGCTTACGTGAACCGAC 4768  
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Dh 4769 GGGGCGCGGAGAAATGTGAGCGTGAACCGAGACCAACCAACCAAGAGAGAGAGAGAGAG 4828  
Qy 2114 CCATCAAGCTGCGCGCGAG 2173  
Dh 4829 CCATCAAGCTGCGCGCGAG 4888  
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Qy 2234 TCAATGAG 2293  
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Qy 2294 GCATCGGCGGCAAG 2353  
Dh 5009 GCATCGGCGGCAAG 5068

QY 2354 TCCGTGACGCGCATCGATGGCGGCATCGTGTATACACAGTACATGACGACCTGTACGTGG 2413  
 DB TCCGTGACGCGCATCGATGGCGGCATCGTGTATACACAGTACATGACGACCTGTACGTGG 5128  
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 DB GCAGCGGCGCCCTAGGATCGATGATTAAGATCTCCCGGGCTAGCACCGGT 5178

RESULT 8  
 US-10-190-435-13  
 ; Sequence 13, Application US/10190435  
 ; Publication NO. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEGEDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
 ; FILE REFERENCE: PP19133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 13  
 ; LENGTH: 3531  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: GagPolmut\_C  
 US-10-190-435-13

Query Match 95.7%; Score 2362.8; DB 12; Length 3531;  
 Best Local Similarity 98.4%; Pred. No. 0;  
 Matches 2411; Conservative 0; Mismatches 27; Indels 12; Gaps 2;

QY 14 TGGCGAGGCCATGAGCAGGCCACCGAGCGCAACATCTGATGACGCGCAGCACTTCA 73  
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 QY 74 AGGCGCCCAAGCGCATCATCAAGTGTCTCAACTGCGCGCAGGAGGCCACCATCGCCGCA 133  
 DB AGGCGCCCAAGCGCATCATCAAGTGTCTCAACTGCGCGCAGGAGGCCACCATCGCCGCA 1207  
 QY 134 ACTGCGCGCCCGCCAGAGAGGCTGTGAGTGTGCGCAGAGGCGCCACCATGCA 193  
 DB ACTGCGCGCCCGCCAGAGAGGCTGTGAGTGTGCGCAGAGGCGCCACCATGCA 1267  
 QY 194 AGGACTGCACCGAGCGCCAGGCCAATCTTCTCGCGAGGACCTGGCCTTCCCGCAGGGCA 253  
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 QY 254 AGGCGCGAGTTCCCAAGCGAGAGAACCGCGCCAAACAGCCCAACCGCGAGCTGC 313  
 DB AGGCGCGAGTTCCCAAGCGAGAGAACCGCGCCAAACAGCCCAACCGCGAGCTGC 1387  
 QY 314 AGGTGCGGCGCAGAACCCCGCAGGAGCGCGCGCCAGCGCCAGCGCACCTGAACT 373  
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 QY 374 TCCCCAGATCACTCTGTGGCAGCGCCCTCTGTGAGCATCAAGTGGCGGCCAGATCA 433  
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 QY 434 AGGAGCCCTGTGGACACCGCGCCGACGACACCGTGTGGAGGAGATGAGCTGCCCG 493  
 DB AGGAGCCCTGTGGACACCGCGCCGACGACACCGTGTGGAGGAGATGAGCTGCCCG 1567  
 QY 494 GCAAGTGAAGCCCAAGATGATCGGCGGCATCGCGGCTTTCATCAAGGTGCGCGATAG 553  
 DB GCAAGTGAAGCCCAAGATGATCGGCGGCATCGCGGCTTTCATCAAGGTGCGCGATAG 1627

QY 554 ACCAGATCCTGATCGAGATCTCGGCAAGAGGCCATCGGCAACCGTGTGATCGGCCCA 613  
 DB ACCAGATCCTGATCGAGATCTCGGCAAGAGGCCATCGGCAACCGTGTGATCGGCCCA 1687  
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 QY 794 TGGAGAAGGAGGCAAGATCAACAGATCGGCCCGCAGAACCTCTACAAACCCCGTGT 853  
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 QY 854 TCGCCATCAAGAAAGAGACGACCAAGTGGCGCAAGCTGTGAGCTTCCGCGAGCTGA 913  
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 DB GCATCCGCTACCAAGTACCAAGTGTGCGCCCGAGGGCTGGAAGGGCAGCCCGACATCTCC 2227  
 QY 1154 AGAGCAGCATGACCAAGATCTTGGAGCCCTTCCGCGCCGCAACCCCGAGATCTGATCT 1213  
 DB AGAGCAGCATGACCAAGATCTTGGAGCCCTTCCGCGCCGCAACCCCGAGATCTGATCT 2287  
 QY 1214 ACCAGTACATGAGACGCTGTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 1273  
 DB ACCA-----GGCCCCCTGTACGTGGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 2341  
 QY 1274 AGATCGAGGAGTGGCGCAAGCACCTGTGCTGGGGCTTCAACACCCCGCAGCAAGAAAGC 1333  
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 QY 1334 ACCAAGAGGAGCCCTTCTGTGGATGGGTACGAGTGTGACCCCGCAGCAAGTGAAGC 1393  
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 QY 1394 TGCAGCCCATCGAGTGTCCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 1453  
 DB TGCAGCCCATCGAGTGTCCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 2515  
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 DB AGCTGCTCGCGGCGCCAAAGCCCTTGACCGACATGTCGCCCTGACCGAGGAGCGGAGC 2635  
 QY 1574 TGGAGCTGGCGAGAACCGCGAGATCTTGGCGGAGCCCGTGTGACGCGCTGTACTAGGAC 1633  
 DB TGGAGCTGGCGGAGAACCGCGAGATCTTGGCGGAGCCCGTGTGACGCGCTGTACTAGGAC 2695



1634 CCAGCAAGACCTGTTGGCCGAGATCCAGAACGAGGCCAGCAAGTGGACCTTACCA 1693  
1696 CCAGCAAGACCTGTTGGCCGAGATCCAGAACGAGGCCAGCAAGTGGACCTTACCA 1755  
1694 TCTACCAAGAGCCCTTCAAGAACCTTGAAGACCGGCAAGTGAAGTGGCCAGCCG 1753  
2756 TCTACCAAGAGCCCTTCAAGAACCTTGAAGACCGGCAAGTGAAGTGGCCAGCCG 2815  
1754 ACACCAAGACCTGTTGGCCGAGATCCAGAACGAGGCCAGCAAGTGGACCTTACCA 1813  
2816 ACACCAAGACCTGTTGGCCGAGATCCAGAACGAGGCCAGCAAGTGGACCTTACCA 2875  
1814 TGATCTGGGCGAAGACCCCAAGTTCCTGCTCCATCCAGAGAGACCTTGGAGACT 1873  
2876 TGATCTGGGCGAAGACCCCAAGTTCCTGCTCCATCCAGAGAGACCTTGGAGACT 2935  
1874 GGTGACCGACCTACCTGGAGAGCCACCTGATCCCGAGTGGAGAGTTCGTTGAAC 1933  
2936 GGTGACCGACCTACCTGGAGAGCCACCTGATCCCGAGTGGAGAGTTCGTTGAAC 2995  
1934 CCCTGTTGAGCTGTGTACAGCTGAGAGAGACCCATCATCGGCGCCGAGACCTTCT 1993  
2996 CCCTGTTGAGCTGTGTGTACAGCTGAGAGAGACCCATCATCGGCGCCGAGACCTTCT 3055  
1994 AGTGGACGCGCGCCGCAACCGGAGACCAAGATCGGCAAGCGGCTTACCTGACCG 2053  
3056 AGTGGACGCGCGCCGCAACCGGAGACCAAGATCGGCAAGCGGCTTACCTGACCG 3115  
2054 GGGGCGCGGAGAGATCGTGAAGCTGACGAGACCAAGATCGGCAAGCGGCTTACCTG 2113  
3116 GGGGCGCGGAGAGATCGTGAAGCTGACGAGACCAAGATCGGCAAGCGGCTTACCTG 3175  
2114 CCATCCAGCTGCTGTGAGAGCAAGCGGAGAGTGAACATCGTGAACCGACAGCT 2173  
3176 CCATCCAGCTGCTGTGAGAGCAAGCGGAGAGTGAACATCGTGAACCGACAGCT 3235  
2174 AGCGCTTGGGATCATTCAGCGCCAGCCGCAAGAGAGAGAGCGAGCTGTGAACCA 2233  
3236 AGCGCTTGGGATCATTCAGCGCCAGCCGCAAGAGAGAGAGCGAGCTGTGAACCA 3295  
2234 TCATCGAGCAGCTGTACAGAGAGAGAGTGAACCTGAGCTGGGCTGCGCCGCAAG 2293  
3286 TCATCGAGCAGCTGTACAGAGAGAGAGTGAACCTGAGCTGGGCTGCGCCGCAAG 3355  
2294 GCATCGGCGGACGAGCAGATCGAACAGCTGGTGAAGAGAGCAATCCGCAAGTGTCT 2353  
3356 GCATCGGCGGACGAGCAGATCGAACAGCTGGTGAAGAGAGCAATCCGCAAGTGTCT 3415  
2354 TCCTGGAGCGCATCATGCGCGCATCGTGTACTTACCAATGACAGACCTGTACTGG 2413  
3416 TCCTGGAGCGCATCATGCGCGCATCGTGTACTTACCAATGACAGACCTGTACTGG 3475  
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3476 GCAGGCGGCGCCTGTGATCGATTAAGCTTCCGCGGCTAGACCGCGT 3525

RESULT 9  
US-10-190-435-14  
; Sequence 14, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEGEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: P1813.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; NUMBER OF SEQ ID NOS: 319

SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 14  
; LENGTH: 3537  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutatC  
US-10-190-435-14  
Query Match 95.6%; Score 2361.2; DB 12; Length 3537;  
Best Local Similarity 98.4%; Pred. No. 0;  
Matches 2410; Conservative 0; Mismatches 28; Indels 12; Gaps 2;  
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134 ACTGCG 193  
1214 ACTGCG 1273  
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1274 AGGACTGACCGAGCG 1333  
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314 AGTGGCGCGGAGCAACCGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 373  
1394 AGTGGCGCGGAGCAACCGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1453  
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1574 GCAAGTGAAGCCCAAGATGATCGCGCGCATCGCGCGCTTATCAAGTGGCGCAATACG 1633  
554 ACCAGATCTGATGAGATCTGCGGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 613  
1634 ACCAGATCTGATGAGATCTGCGGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1693  
614 CCGCGGAGCATATGATGCGCGCAACATGCTGAGCCAGCTGGGCTGCACTTGAACCTTCC 673  
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794 TGAAG 853  
1874 TGAAG 1933  
854 TGGCCATCAAG 913  
1934 TGGCCATCAAG 1993



QY 914 ACAAGCGACCCAGGACTTCTGGAGGTGACGTGGGCATCCCCACCCCGCGGCTGA 973  
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 QY 1574 TGGAGCTGCGGAGACCGGAGATCTGGGAGGCGGCTGACCGGCTGTACTAGCAC 1633  
 Db 2642 TGGAGCTGCGGAGACCGGAGATCTGGGAGGCGGCTGACCGGCTGTACTAGCAC 2701  
 QY 1634 CCAGCAAGGACCTGTGTGGCGGAGATCCAGAACGAGGCGGCGACCAAGTGCATACCAGA 1693  
 Db 2702 CCAGCAAGGACCTGTGTGGCGGAGATCCAGAACGAGGCGGCGACCAAGTGCATACCAGA 2761  
 QY 1694 TCTACAGAGGCGCTTCAAGACCTGAAGACCGGAGTACGCCAAGATGGCGACCGGCC 1753  
 Db 2762 TCTACAGAGGCGCTTCAAGACCTGAAGACCGGAGTACGCCAAGATGGCGACCGGCC 2821  
 QY 1754 ACACCAACGAGTGAAGCTGACCGGCGGTGCAGAGATCGCATGGAGAGCATCG 1813  
 Db 2822 ACACCAACGAGTGAAGCTGACCGGCGGTGCAGAGATCGCATGGAGAGCATCG 2881  
 QY 1814 TGATCTGGGGCAAGACCCCAAGTTCGGCTGCCATCCAGAACGAGACCTGGGAGACCT 1873  
 Db 2882 TGATCTGGGGCAAGACCCCAAGTTCGGCTGCCATCCAGAACGAGACCTGGGAGACCT 2941  
 QY 1874 GTTGAACCACTACTGGCAGGCGCACTGGATCCCGAGTGGGAGTTCGTGAACACCCCCC 1933  
 Db 2942 GTTGAACCACTACTGGCAGGCGCACTGGATCCCGAGTGGGAGTTCGTGAACACCCCCC 3001  
 QY 1934 CCTGTGTAGCTGTGGTACCACTGGAGAGGCCATCATCGGCGCGGAGACCTTCT 1993  
 Db 3002 CCTGTGTAGCTGTGGTACCACTGGAGAGGCCATCATCGGCGCGGAGACCTTCT 3061  
 QY 1994 ACGTGGACGGCGCGCAACCGGAGACCAAGATCGGCAAGCGCGCTACGTGACCGACC 2053

Db 3062 ACGTGGACGGCGCGCAACCGGAGACCAAGATCGGCAAGCGCGCTACGTGACCGACC 3121  
 QY 2054 GGGGCGGCGCAAGATCTGTAGCTGTGACCGAGACCAACCAAGAGCCCGAGCTGACGG 2113  
 Db 3122 GGGGCGGCGCAAGATCTGTAGCTGTGACCGAGACCAACCAAGAGCCCGAGCTGACGG 3181  
 QY 2114 CCATCCAGCTGGCCCTGAGGACGCGGAGGAGTGAACATCTGTGACCGAGACCGAGT 2173  
 Db 3182 CCATCCAGCTGGCCCTGAGGACGCGGAGGAGTGAACATCTGTGACCGAGACCGAGT 3241  
 QY 2174 ACGCCCTGGGCATCATCCAGGCCCGCCAGAGGAGAGGAGTGGTGAACCCAGA 2233  
 Db 3242 ACGCCCTGGGCATCATCCAGGCCCGCCAGAGGAGAGGAGTGGTGAACCCAGA 3301  
 QY 2234 TCATCGAGCAGTGTATCAAGAGGAGAGGAGTGTACTGAGCTGGTGGTGGCCGCCACAAG 2293  
 Db 3302 TCATCGAGCAGTGTATCAAGAGGAGAGGAGTGTACTGAGCTGGTGGTGGCCGCCACAAG 3361  
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 Db 3362 GCATCGGCGGCAACGAGCAGATCGAACAAGCTGGTGAACAAAGGCGATCCGCAAGGTGCTGT 3421  
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 Db 3422 TCCTGGACGGCATCGATCGCGGCATCGTGTATCTACAGTACATGACGACCTGTAGCTGG 3481  
 QY 2414 GCAGCGGCGGCTTAGTATCGATTAAGCTTCCCGGGCTAGCACCGGT 2463  
 Db 3482 GCAGCGGCGGCTTAGTATCGATTAAGCTTCCCGGGCTAGCACCGGT 3531

RESULT 10

US-10-190-435-15  
 ; Sequence 15, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEGEDE, Jan  
 ; APPLICANT: EARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
 ; FILE REFERENCE: PPI8133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 15  
 ; LENGTH: 3537  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutina\_C  
 US-10-190-435-15

Query Match 95.6%; Score 2361.2; DB 12; Length 3537;  
 Best Local Similarity 98.4%; Pred. No. 0;  
 Matches 2410; Conservative 0; Mismatches 28; Indels 12; Gaps 2;

QY 14 TGGCGGAGGCGCATGAGCCAGGCCACCGGCCCAACATCTGTGACGCGCAGCACTTCA 73  
 Db 1094 TGGCGGAGGCGCATGAGCCAGGCCCAACATCTGTGACGCGCAGCACTTAAAA 1153  
 QY 74 AGGGCCCCAAGCGCATCATCAAGTCTTCAACTGGCGCAAGAGGGCCACATCGCCCGCA 133  
 Db 1154 AGGGCCCCAAGCGCATCATCAAGTCTTCAACTGGCGCAAGAGGGCCACATCGCCCGCA 1213  
 QY 134 ACTGCGCGCCCCCGCAAGAGGCGTCTGGAAGTGGCGAAGAGGGCCACCAAGATGA 193  
 Db 1214 ACTGCGCGCCCCCGCAAGAGGCGTCTGGAAGTGGCGAAGAGGGCCACCAAGATGA 1273

QY 194 AGAAGTGCACGAGCGCCAGGCGCAACTTCTTCCGAGGAGCCTGTGCTTCCGCCAGGCA 253  
 Db 1274 AGGATTCGACCGAAGGCCAGAGGCCAACTTCTTCCGAGAGGACCTGTGCTTCCGCCAGGCA 1333  
 QY 254 AGGCGCCGAGTTTCCCGAGCGAGCAAGAACCGCGCCAAAGAGCCCAACGACCGCGAGCTGC 313  
 Db 1334 AGGCGCCGAGTTTCCCGAGCGAGCAAGAACCGCGCCAAAGAGCCCAACGACCGCGAGCTGC 1393  
 QY 314 AGGTGCGCGGCGACAGACCCCGGAGCGAGCGCGGCGGAGCGGAGCGGAGCGGAGCGGAGCT 373  
 Db 1394 AGGTGCGCGGCGACAGACCCCGGAGCGAGCGCGGCGGAGCGGAGCGGAGCGGAGCGGAGCT 1453  
 QY 374 TCCCCAGATCACTCTGTGCGAGCGCCCTGTGTGAGATCAAGGTGGCGCGCGAGATCA 433  
 Db 1454 TCCCCAGATCACTCTGTGCGAGCGCCCTGTGTGAGATCAAGGTGGCGCGCGAGATCA 1513  
 QY 434 AGGAGCGCCCTGTGAGACACCGGCGCGAGACACCGTGTGAGAGAGATGAGCTTGC 493  
 Db 1514 AGGAGCGCCCTGTGAGACACCGGCGCGAGACACCGTGTGAGAGAGATGAGCTTGC 1573  
 QY 494 GCAAGTGAAGGCCAAGATGATCGGCGGCGATCGGCGGCTTCAACAAGGTGGCGCGAGTACG 553  
 Db 1574 GCAAGTGAAGGCCAAGATGATCGGCGGCGATCGGCGGCTTCAACAAGGTGGCGCGAGTACG 1633  
 QY 554 ACCAGATCCTGATCGAGATCTGCGGCAAGAGGCCATCGGCAACCGTGTGATCGGCGCCA 613  
 Db 1654 ACCAGATCCTGATCGAGATCTGCGGCAAGAGGCCATCGGCAACCGTGTGATCGGCGCCA 1693  
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 QY 854 TCGCATCAAGAGAGAGAGACAGACCAAGTGGCGAGCTGTGATCTCCGCGAGCTGA 913  
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 QY 914 ACAAGCGCACCCAGGACTTCTGAGAGGTGCAAGCTGGGCAATCCCCACCCCGCGGCTGA 973  
 Db 1994 ACAAGCGCACCCAGGACTTCTGAGAGGTGCAAGCTGGGCAATCCCCACCCCGCGGCTGA 2053  
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 QY 1094 GCATCCGCTACCAATGAACAGTGTCTCCCAAGGCTGGAAGAGGCGAGCGCCAGATCTTCC 1153  
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 QY 1154 AAGAGCGATGAACCAAGATCTGAGAGCTTCCGCGCGCGCAACCCCGAGATCTGATCT 1213  
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 Db 2294 ACCAGTACATGAGCGACTGTACTGTGGAGCGAGCGACTGAGATGGCGCAGACCGGCGCA 2347  
 QY 1274 AGATGAGAGAGCTGCGCAAGACAGCTGTGCTGGGCTTCAACCAACCCCGAGCAAGAGC 1333

Db 2248 AGATCGAGAGCTGCGCAACACTGTGCGCTGGGGCTTACACACCCCGAGCAAGAGC 2407  
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 Db 2408 ACCGAGAGAGCCCCCTTCTGTGTGATGGGCTTACGAGCTGACACCCCGAGCAAGTGGACG 2461  
 QY 1394 TGCAGCCCATCGAGCTGCCGAGAGAGAGAGCTGAGACCGTGAACGACATCCAGAGGTGG 1453  
 Db 2462 TGCAGCCCATCGAGCTGCCGAGAGAGAGAGCTGAGACCGTGAACGACATCCAGAGGTGG 2521  
 QY 1454 TGGGCAAGCTGAATGGGCGAGAGCTTACCCCGGATCAAGTGGCGCCAGTGTGCA 1513  
 Db 2522 TGGGCAAGCTGAATGGGCGAGCGAGATTAACCCCGGATCAAGTGGCGCCAGTGTGCA 2581  
 QY 1514 AGCTGTGCGGCGGCGCAAGGCGCTGACCGACATCGTGTCCCTTACCGAGAGGCGGAGC 1573  
 Db 2582 AGCTGTGCGGCGGCGCAAGGCGCTGACCGACATCGTGTCCCTTACCGAGAGGCGGAGC 2641  
 QY 1574 TGGAGCTGGCGGAGAACCGGAGATCTGTGCGCGAGCGCGGTCAGCGGCTGTACTACAGAC 1633  
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 Db 2702 CCAAGCAAGACCTGTGGCGGAGATCGAAGAGCGAGGCGACAGCAAGTGAACCTTACAGA 2761  
 QY 1694 TCTPACAGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCAAGATGGCGACCGGCC 1753  
 Db 2762 TCTPACAGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCAAGATGGCGACCGGCC 2821  
 QY 1754 ACACCAACGACGTGAAGAGCTGACCGAGCGGCTGCAAGAGATCGCATGAGAGCATCG 1813  
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 Db 2882 TGAATCTGGGCGCAAGACCCCAAGTTCCGCTTCCCATTCAGAGAGAGACTTGGGAGACT 2941  
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 Db 2942 GGTGAGACGACTTACGTGGAGGCGCACTGTGATCCCCGAGTGGAGATTCGTGAACACCCCG 3001  
 QY 1934 CCTGTGTAAGCTGTGTGATCAAGCTGGAAGAGCCCATCATCGGCGCGCAAGACTTCT 1993  
 Db 3002 CCTGTGTAAGCTGTGTGATCAAGCTGGAAGAGCCCATCATCGGCGCGCAAGACTTCT 3061  
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 Db 3062 ACGTGAAGGCGCGCGCAACCGGAGAACCAAGATCGGCAAGGCGGCTTACCGTGAACCGAC 3121  
 QY 2054 GGGGCGGCAAGAGCTGTGAGCTGACCGGAGCACCAACAGAGACCGAGCTGACG 2113  
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 QY 2234 TCATGAGACAGCTGATCAAGAGAGAGAGTGTGATGAGTGGTGGCCGCGCAAGG 2293  
 Db 3302 TCATGAGACAGCTGATCAAGAGAGAGAGTGTGATGAGTGGTGGCCGCGCAAGG 3361  
 QY 2294 GCATGGGCGGCAAGAGAGATCGACAGCTGTGTGAGAGAGGCAATCCGCAAGTGTGT 2353  
 Db 3362 GCATGGGCGGCAAGAGAGATCGACAGCTGTGTGAGAGAGGCAATCCGCAAGTGTGT 3421  
 QY 2354 TCTGAGCGGAGCATGATGGCGGATCGATCTGATCAATGAGACAGCTGTGCTGTG 2413

Db 3422 TCCTGGACGGCATCGATGCGCGCATCTGTAATCTACCAAGTACATGACGACCTGTACGTGG 3481  
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Db 3482 GCAGCGGGCCCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 3531  
RESULT 11  
US-10-190-435-12  
; Sequence 12, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEGEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; FILE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: PPI8133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 12  
; LENGTH: 5145  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:  
; OTHER INFORMATION: GagCompPolmutInaTatRevNef\_C  
US-10-190-435-12  
Query Match 95.6%; Score 2360.2; DB 12; Length 5145;  
Best Local Similarity 99.2%; Pred. No. 0;  
Matches 2397; Conservative 0; Mismatches 8; Indels 12; Gaps 2;  
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Qy 74 AGGGCCCCAAGCGCATCATCAAGTGTCTCAATGCGGCAAGAGGGCCACATCGCCCGCA 133  
Db 1547 AGGGCCCCAAGCGCATCATCAAGTGTCTCAATGCGGCAAGAGGGCCACATCGCCCGCA 1606  
Qy 134 ACTGCGCGCCCCCGCCAGAGAGGCTGTGAGTGTGCGGAGAGGGCCACAGATGA 193  
Db 1607 ACTGCGCGCCCCCGCCAGAGAGGCTGTGAGTGTGCGGAGAGGGCCACAGATGA 1666  
Qy 194 AGGACTGCACCGAGCGCCAGGCCAACTTCTTCGCGAGGACCTGGCTTCCCGCCAGGGCA 253  
Db 1667 AGGACTGCACCGAGCGCCAGGCCAACTTCTTCGCGAGGACCTGGCTTCCCGCCAGGGCA 1726  
Qy 254 AGGCCCGAGTTCGCCAGCAGAGAAACCGCCCAACAGCCCAACAGCCCGAGCTGC 313  
Db 1727 AGGCCCGAGTTCGCCAGCAGAGAAACCGCCCAACAGCCCAACAGCCCGAGCTGC 1786  
Qy 314 AGTGGCGGCGACACACCCCGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373  
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Qy 374 TCCCCCAGATCACTCTGTGGCAGCGCCCTCTGTGAGCATCAAGTGGCGGCGCAGATCA 433  
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Qy 434 AGGAGCCCTGTGGACACCGCGCGCGAGACACCGTGTGGAGGAGATGAGCTTGCCTG 493  
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Qy 494 GCAAGTGGAGCCCAAGATGATCGGCGGCGATCGCGGCTTCAATCAAGTGGCGGAGTACG 553  
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Db 2327 TCGCCATCAAGAAAGAGGAGACAGACCAAGTGGCGCAAGCTGTGAGCTTCGCGAGCTGA 2386  
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Qy 974 AGAAGAAAGAGCGTGAACCTGTGTGACGTGGGAGCGCTTCTTACAGCTGCCCCCTGG 1033  
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Qy 1034 ACGAGGACTTCGCGAAGTACACCGCTTCAACATCCCGAGGATCAACAAACAGAGACCCCG 1093  
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Qy 1154 AGAGCAGCATGACCMAGATCCTGTGAGCCCTTCCCGGCGCGCAACCCCGAGATCTGATCT 1213  
Db 2627 AGAGCAGCATGACCMAGATCCTGTGAGCCCTTCCCGGCGCGCAACCCCGAGATCTGATCT 2686  
Qy 1214 ACCAGTACATGACGACCTGTACGTGGGAGCGACCTGAGATCGCGCAGCACCGGCCA 1273  
Db 2687 ACCA-----GCCCCCTGTACGTGGGAGCGACCTGAGATCGCGCAGCACCGGCCA 2740  
Qy 1274 AGATCGAGGAGTGCAGAACACCTGTCTGCGTGGGGCTTCAACACCCCGCAAGAAAGC 1333  
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Db 2915 TGGGCAAGCTGAACCTGGGCGCAGCAGATCTTACCCCGGATCAAGGTGGCGGCTGTGA 2974  
Qy 1514 AGCTGCTCGCGGCGCCAAAGCCCTTGAACGATCTGTCCTTGAACCGAGGAGCGCGAGC 1573  
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Db 3035 TGAAGTGGCGAGAACCGCGAGATCTTCCCGGAGCCCGCTGCAACCGCTGTACTACGACC 3094  
Qy 1634 CCAGCAAGGACTGTGTGGCGGAGATCCAGAAAGAGGGGCCACGACCAAGTGGACCTACCAGA 1693

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Db      3095  CCAGCAAGGACCTGTGGCCGAGATCCAGACAGGCGCACACCAAGTGGACCTTACAGAA 3154
Qy      1694  TCTACAGAGGCGCTTCAAGACCTGAGAACCGGCAAGTAAAGCCAAAGATGGCGACCGGCC 1753
Db      3155  TCTACAGAGGCGCTTCAAGACCTGAGAACCGGCAAGTAAAGCCAAAGATGGCGACCGGCC 3214
Qy      1754  ACACCAAGCAGCTGAAGCAGCTGACCGGCGCGTGCAGAAAGATCCCATGAGAGCATG 1813
Db      3215  ACACCAAGCAGCTGAAGCAGCTGACCGGCGCGTGCAGAAAGATCCCATGAGAGCATG 3274
Qy      1814  TGATCTGGGGCAGAACCCCAAGTTCGCTCCCATCCAGAGAGACCTTGGAGACCT 1873
Db      3275  TGATCTGGGGCAGAACCCCAAGTTCGCTCCCATCCAGAGAGACCTTGGAGAGACCT 3334
Qy      1874  GGTGACCGGACCTGAGGAGGCGCACCTGGATCCCGAGTGGAGATTCGTGAACAACCCCC 1933
Db      3335  GGTGACCGGACCTGAGGAGGCGCACCTGGATCCCGAGTGGAGATTCGTGAACAACCCCC 3394
Qy      1934  CCTGTGTAAGCTGTGTATCCAGCTGAGAGAGAGCCCATCATCCGCGCCGAGACCTTCT 1993
Db      3395  CCTGTGTAAGCTGTGTATCCAGCTGAGAGAGAGCCCATCATCATCCGCGCCGAGACCTTCT 3454
Qy      1994  ACGTGAAGCGCGCGCCGACACCGCGAGACCAAGATCGGCAAGCGCGCTTACTGACCGAC 2053
Db      3455  ACGTGAAGCGCGCGCCGACACCGCGAGACCAAGATCGGCAAGCGCGCTTACTGACCGAC 3514
Qy      2054  GGGGCGGCGAGAGATCGTGAAGCTGACCGGACCAACCAAGAGACCGGAGCTGGACG 2113
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Qy      2114  CCATCAGCTGCGCCCTGAGAGGACAGCGGACGAGAGTGAACATCTGTGACCGACAGCCAGT 2173
Db      3575  CCATCAGCTGCGCCCTGAGAGGACAGCGGAGAGTGAACATCTGTGACCGACAGCCAGT 3634
Qy      2174  ACGCCCTTGGGATCATCTCAAGGCCCGACCGGACCAAGAGCGAGCGAGCTGTGAACCGA 2233
Db      3635  ACGCCCTTGGGATCATCTCAAGGCCCGACCGGACCAAGAGCGAGCGAGCTGTGAACCGA 3694
Qy      2234  TCATGAGCAGCTGATCAAGAAAGAGAGTGTACTGTAGCTGGGTGCGCGGCGCCAGAGG 2293
Db      3695  TCATGAGCAGCTGATCAAGAAAGAGAGTGTACTGTAGCTGGGTGCGCGGCGCCAGAGG 3754
Qy      2294  GCATCGGCGGCAACAGAGATGCAACAAGCTGTGAGCAAGGCGCATCCGCAAGTGTCTGT 2353
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Qy      2354  TCTCGAGAGGAGTCAATGGCGGCACTGTATCTACAGTACATGAGCAACCTGTACTGTGG 2413
Db      3815  TCTCGAGAGGAGTCAATGGCGGCACTGTATCTACAGTACATGAGCAACCTGTACTGTGG 3874
Qy      2414  GCAGCGGCGGCGCTTAGG 2430
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RESULT 12
US-10-190-435-47
; Sequence 47, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARRETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrellita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: PPI813.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0

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; SEQ ID NO 47
; LENGTH: 3624
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: p2FolIacRevIef.opt.native_c
US-10-190-435-47

Query Match      95.2%; Score 2349.4; DB 12; Length 3624;
Best Local Similarity 98.3%; Pred. No. 0;
Matches 2374; Conservative 0; Mismatches 41; Indels 0; Gaps 0;

Qy      7  GCCACCATGGCGGCGGCGCATGAGCCAGGCGCCAGCGCAACATCTGTATGACGCGACG 66
Db      1  GCCACCATGGCGGCGGCGCATGAGCCAGGCGCCAGCGCAACATCTGTATGAGCGACG 60
Qy      67  AACTTCAAGGGCGCCCAAGCGCATCATCAAGTCTTCAACTGCGCAAGAGAGGCGCACATC 126
Db      61  AACTTCAAGGGCGCCCAAGCGCATCATCAAGTCTTCAACTGCGCAAGAGAGGCGCACATC 120
Qy      127  GCCCGCAACTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 186
Db      121  GCCCGCAACTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 180
Qy      187  CAGATGAAGGACTGACCGGAGCGCGCAAGTCTTCCGCGGAGAGCCTTGGCTTCCG 246
Db      181  CAGATGAAGGACTGACCGGAGCGCGCAAGTCTTCCGCGGAGAGCCTTGGCTTCCG 240
Qy      247  CAGGGCAGAGGCGCGCGAGTTCGCCAGGAGAGAACCGCGCAACAGCCCGCACAGCGCG 306
Db      241  CAGGGCAGAGGCGCGCGAGTTCGCCAGGAGAGAACCGCGCAACAGCCCGCACAGCGCG 300
Qy      307  GAGGTGAGAGTGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 366
Db      301  GAGGTGAGAGTGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 360
Qy      367  CTGAACCTTCCCGCGAGATCACCGTGTGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 426
Db      361  CTGAACCTTCCCGCGAGATCACCGTGTGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 420
Qy      427  CAGATCAAGAGGCGCGCTGTGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 486
Db      421  CAGATCAAGAGGCGCGCTGTGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 480
Qy      487  CTGCGCGGCAAGTGAAGGCCCAAGATGATGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 546
Db      481  CTGCGCGGCAAGTGAAGGCCCAAGATGATGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 540
Qy      547  CAGTACGACGAGTCTGTATGAGATCTGCGGCGCAAGAGGCGCATCGGCAACGCTGTATC 606
Db      541  CAGTACGACGAGTCTGTATGAGATCTGCGGCGCAAGAGGCGCATCGGCAACGCTGTATC 600
Qy      607  GCGCCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 666
Db      601  GCGCCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 660
Qy      667  AACTTCCCATCAAGCCCGCATGAGACCGTGGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 726
Db      661  AACTTCCCATCAAGCCCGCATGAGACCGTGGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 720
Qy      727  CCNAGGTGAAGCACTGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 786
Db      721  CCNAGGTGAAGCACTGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 780
Qy      787  GAGGAGATGAGAGAGGAGGCGCGCAAGTACCAAGATCGCGCGCGCGCGCGCGCGCGCGCG 846
Db      781  GAGGAGATGAGAGAGGAGGCGCGCAAGTACCAAGATCGCGCGCGCGCGCGCGCGCGCGCG 840
Qy      847  CCGGTGTTGCGCATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 906
Db      841  CCGGTGTTGCGCATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 900

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QY 907 GAGCTGAACAGCGCACCCAGGACTTCTGGAGGTCAGCTGGGCATCCCCACCCGCC 966  
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 QY 901 GAGCTGAACAGCGCACCCAGGACTTCTGGAGGTCAGCTGGGCATCCCCACCCGCC 960  
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 QY 967 GGCCTGAAGAAGAAGAGCGCTGACCGCTGCTGGAGCTGGCGCACCCCTACTTTCAGCGTG 1026  
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 QY 961 GGCCTGAAGAAGAAGAGCGTGACCGTCTGGAGCTGGCGCACCCCTACTTTCAGCGTG 1020  
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 QY 1027 CCGCTGGACGAGGACTTCGGAAGTACAGCGCTTCAACATCCCGAGTCAACACGAG 1086  
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 QY 1021 CCGCTGGACGAGGACTTCGGAAGTACAGCGCTTCAACATCCCGAGTCAACACGAG 1080  
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 QY 1087 ACCCCCGGATCCGCTACAGTACACGCTGCTGCCCGAGGCTGGAGGCGAGCCCGAC 1146  
 Db |||||  
 QY 1081 ACCCCCGGATCCGCTACAGTACACGCTGCTGCCCGAGGCTGGAGGCGAGCCCGAC 1140  
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 QY 1147 ATCTTCCAGAGCAGCATACCAAGATCCTGGAGCCCTTCGCGCGCGCAACCCCGAGATC 1206  
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 QY 1141 ATCTTCCAGAGCAGCATACCAAGATCCTGGAGCCCTTCGCGCGCGCAACCCCGAGATC 1200  
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 QY 1201 GTGATCTACAGTACATGAGAGCTGTAGCTGGGAGCGACCTGGAGATCGGCCAGCAC 1260  
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 QY 1261 CGCGCCAGATCGAGGAGCTCGCAGACCTGCTGCTGGGCTTCAACCCCGGAC 1320  
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 QY 1321 AAGAAGCACAGAGAGAGCCCGCTTCTGTGAGTGGCTACGAGTGCACCCCGACAAG 1380  
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 QY 1441 AAGCTGGTGGCAAGCTGAACCTGGCGAGCCAGATCTACCCGGCATCAAGTGGCCAG 1500  
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 QY 1507 CTGTGAAGCTGTGGCGCGCGCAAGGCGCTGACCGACATCTGTGCGCTTACCCGAGGAG 1566  
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 QY 1501 CTGTGAAGCTGTGGCGCGCGCAAGGCGCTGACCGACATCTGTGCGCTTACCCGAGGAG 1560  
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 QY 1561 GCGAGCTGGAGCTGCGCGAGAACCGCGAGATCTGCGCGAGCCCTGTGACGCGGTGTAC 1620  
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 QY 1627 TAGCACCCAGCAAGACCTGTGGCGGAGATCCAGAAGCAGGCGCCACGACAGTGGAC 1686  
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 QY 1621 TAGCACCCAGCAAGACCTGTGGCGGAGATCCAGAAGCAGGCGCCACGACAGTGGAC 1680  
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 QY 1687 TACCAGATCTACAGAGCGCTTCAAGAACCTGAAGACCGGCAAGTACGCCAAGATGCGC 1746  
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 QY 1681 TACCAGATCTACAGAGCGCTTCAAGAACCTGAAGACCGGCAAGTACGCCAAGATGCGC 1740  
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 QY 1747 ACGCCCAACCAACACAGCTGAGCAGCTGACCGAGCGCGTGCAGAGATCGCCATGGAG 1806  
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 QY 1741 ACGCCCAACCAACACAGCTGAGCAGCTGACCGAGCGCGTGCAGAGATCGCCATGGAG 1800  
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 QY 1807 AGCATCTGATCTGGGGCAAGACCCCAAGTTCGGCTGCGCATCCAGAAGGAGACCTCG 1866  
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 QY 1801 AGCATCTGATCTGGGGCAAGACCCCAAGTTCGGCTGCGCATCCAGAAGGAGACCTCG 1860  
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 QY 1867 GAGACCTGTGGACCGACTACTGGCAGGCCACCTGGATCCCGAGTGGAGTTCGTGAAC 1926  
 Db |||||  
 QY 1861 GAGACCTGTGGACCGACTACTGGCAGGCCACCTGGATCCCGAGTGGAGTTCGTGAAC 1920  
 Db |||||  
 QY 1927 ACCCCCCCTGTGTAAGTGTGTTACAGCTGGAGAGAGCCCATCATTCGCGCGCGAG 1986  
 Db |||||  
 QY 1921 ACCCCCCCTGTGTAAGTGTGTTACAGCTGGAGAGAGCCCATCATTCGCGCGCGAG 1980  
 Db |||||  
 QY 1987 ACCTTCTACGTGAGCGCGCGCCACCGCGAGACCAAGATCGGCAAGGCGCGCTACGTG 2046  
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Db 1981 ACCTTCTACGTGAGCGGCGCCCAACCGCGAGACAAGATCGGCAAGCGCGCTACGTG 2040  
 QY 2047 ACCGACCGGGCGCGCAGAAATCTGTGAGCTTGAACCGGACCAACCAAGAGACCGGAG 2106  
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 QY 2041 ACCGACCGGGCGCGCAGAAATCTGTGAGCTTGAACCGGACCAACCAAGAGACCGGAG 2100  
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 QY 2107 CTGAGGCGCATTCAGCTGGCTGCGGCTGAGGACGCGGAGCGGAGCGAGTGAACATCTGTGACCGAC 2166  
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 QY 2101 CTGAGGCGCATTCAGCTGGCTGCGGCTGAGGACGCGGAGCGGAGCGAGTGAACATCTGTGACCGAC 2160  
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 QY 2167 AGCCAGTACGCCCTGGGCTATCATCAGGCGCCAGCGCCCAAGAGCGAGCGAGTGGTG 2226  
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 QY 2161 AGCCAGTACGCCCTGGGCTATCATCAGGCGCCAGCGCCCAAGAGCGAGCGAGTGGTG 2220  
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 QY 2227 AACAGATCATCAGCAGCTGATCAAGAGGAGAGGTTTACTGAGCTGGGTGCCCGCC 2286  
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 QY 2221 AACAGATCATCAGCAGCTGATCAAGAGGAGAGGTTTACTGAGCTGGGTGCCCGCC 2280  
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 QY 2287 CACAAGGCGATCGGCGGCAACGAGCAGATCGACAAGCTGGTGAAGAGGCGATTCGCAAG 2346  
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 QY 2281 CACAAGGCGATCGGCGGCAACGAGCAGATCGACAAGCTGGTGAAGAGGCGATTCGCAAG 2340  
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 QY 2347 GTGCTGTTCTTGGACGCGCATCGATCGCGCATCGTGTATCTACAGTACATGACGACCTG 2406  
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 QY 2341 GTGCTGTTCTTGGACGCGCATCGATCGCGCATCGTGTATCTACAGTACATGACGACCTG 2400  
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 QY 2407 TACGTGGGCGCGCC 2421  
 Db 2401 CCAAGACCGCGCTGC 2415

RESULT 13  
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 ; Sequence 48, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEDEDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; FILE REFERENCE: PPI8133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 48  
 ; LENGTH: 3607  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: p2PolTatRevNef.opt\_C  
 US-10-190-435-48

Query Match 93.2%; Score 2301.8; DB 12; Length 3607;  
 Best Local Similarity 97.6%; Pred. No. 0;  
 Matches 2362; Conservative 0; Mismatches 47; Indels 12; Gaps 2;

QY 1 GTCGAGCGCACCATGGCGGAGCCCATGAGCCAGGCGCACCGCGCCCAACATCTGTATGAG 60  
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 QY 61 GTCGAGCGCACCATGGCGGAGCCCATGAGCCAGGCGCACCGCGCCCAACATCTGTATGAG 120  
 Db |||||  
 QY 61 GTCGAGCGCACCATGGCGGAGCCCATGAGCCAGGCGCACCGCGCCCAACATCTGTATGAG 120  
 Db |||||  
 QY 121 CACATCGCCGCAACTGCGCGCCCGCGCCCGCGCAAGAGGCTGCTGAAGTGGCGCAAGGAG 180  
 Db |||||  
 QY 121 CACATCGCCGCAACTGCGCGCCCGCGCCCGCGCAAGAGGCTGCTGAAGTGGCGCAAGGAG 180  
 Db |||||

QY	181	GGCCACCAAGATGAAAGAACTGCAACGAGGCGCAAGCCAACTTCTTCCGAGAGGACTGTGGC	240
Dp	181	GGCCACCAAGATGAAAGAACTGCAACGAGGCGCAAGCCAACTTCTTCCGAGAGGACTGTGGC	240
QY	241	TTCCCCCAAGGAGAGGCGCGAGGTTCCCGACAGAGCAAGAACCCGCGCAACAGCCGACC	300
Dp	241	TTCCCCCAAGGAGAGGCGCGAGGTTCCCGACAGAGCAAGAACCCGCGCAACAGCCGACC	300
QY	301	AGCCGCGAGCTGCAAGTTCGCGCGCAACCCCGCAGCGAGGCGCGGCGCGAGCGCGAC	360
Dp	301	AGCCGCGAGCTGCAAGTTCGCGCGCAACCCCGCAGCGAGGCGCGGCGCGAGCGCGAC	360
QY	361	GGCAACCTGAACTTCCCGCAGATCAACCTTGCGAGCGGCGCCCGGTGAGGATCAAGTG	420
Dp	361	GGCAACCTGAACTTCCCGCAGATCAACCTTGCGAGCGGCGCCCGGTGAGGATCAAGTG	420
QY	421	GGCGGCGAGATCAAGAGAGCCCTCTGTGACACCGCGCGCGACACCTGTGCTGAGAG	480
Dp	421	GGCGGCGAGATCAAGAGAGCCCTCTGTGACACCGCGCGCGACACCTGTGCTGAGAG	480
QY	481	ATGAGCCTGCGCGCGCAAGTGGAAACCCAGATGATCGCGCGGCATCGCGGCTTATCAAG	540
Dp	481	ATGAGCCTGCGCGCGCAAGTGGAAACCCAGATGATCGCGCGGCATCGCGGCTTATCAAG	540
QY	541	GTGCGCGAGTACGACCCAGATCCTGATCGAGATCTGCGCGCAAGAGGCCATCGGACCGTG	600
Dp	541	GTGCGCGAGTACGACCCAGATCCTGATCGAGATCTGCGCGCAAGAGGCCATCGGACCGTG	600
QY	601	CTGATTCGCGCCCAACCCCGGTGAACTCATCGCGCGCAATGCTGTAACCACTGTGGCTGC	660
Dp	601	CTGATTCGCGCCCAACCCCGGTGAACTCATCGCGCGCAATGCTGTAACCACTGTGGCTGC	660
QY	661	ACCGTGAACCTTCCCATCAGCCCATCGAGACCGTGCCCGTGAAGCTAAACCCGCGATG	720
Dp	661	ACCGTGAACCTTCCCATCAGCCCATCGAGACCGTGCCCGTGAAGCTAAACCCGCGATG	720
QY	721	GACGCGCCCAAGTGAAGCAAGTGGCCCTGACCGAGGAAAGATCAAGGCCCTTGAACGCGC	780
Dp	721	GACGCGCCCAAGTGAAGCAAGTGGCCCTGACCGAGGAAAGATCAAGGCCCTTGAACGCGC	780
QY	781	ATCTGCGAGGAGATGAGAAAGAGGCGCAAGTCAACCAAGATCGGCGCCGAGAACCCCTAC	840
Dp	781	ATCTGCGAGGAGATGAGAAAGAGGCGCAAGTCAACCAAGATCGGCGCCGAGAACCCCTAC	840
QY	841	AACAACCCCGTGTTCGCCATCAAGAAAGAGGACAGCACCAAGTGGCGCAACTGTGTGAC	900
Dp	841	AACAACCCCGTGTTCGCCATCAAGAAAGAGGACAGCACCAAGTGGCGCAACTGTGTGAC	900
QY	901	TTCCGCGAGCTGAAACAAGCGCACCGGAGACTTCTGAGAGGTGCACTGTGGATCCCGAC	960
Dp	901	TTCCGCGAGCTGAAACAAGCGCACCGGAGACTTCTGAGAGGTGCACTGTGGATCCCGAC	960
QY	961	CCCGCGCGCTGAAAGAAAGAAAGAGCGGTGACCGTGTGAGCGTGGCGAGCGCTTACTTC	1020
Dp	961	CCCGCGCGCTGAAAGAAAGAAAGAGCGGTGACCGTGTGAGCGTGGCGAGCGCTTACTTC	1020
QY	1021	AGCGTGGCCCTGAGAGAGACTTCCGCAAGTACACCGCTTACCATCTCCAGGACTCAAC	1080
Dp	1021	AGCGTGGCCCTGAGAGAGACTTCCGCAAGTACACCGCTTACCATCTCCAGGACTCAAC	1080
QY	1081	AACGAGAACCCCGCGCATCGCTACCAAGTACAAAGTCTGCCCCAGAGGCTGAGAGGCGACG	1140
Dp	1081	AACGAGAACCCCGCGCATCGCTACCAAGTACAAAGTCTGCCCCAGAGGCTGAGAGGCGACG	1140
QY	1141	CCGAGCATCTTCCAGAGCAGCTGACCAAGATCCTGGAAGCTTTCGCGCCCGCAACCC	1200
Dp	1141	CCGAGCATCTTCCAGAGCAGCTGACCAAGATCCTGGAAGCTTTCGCGCCCGCAACCC	1200
QY	1201	GAGATCGATCTTACAGATACATGGAGACACCTGTACGAGGAGAGGACCTGAGAGTCCGGC	1260
Dp	1201	GAGATCGATCTTACAGATACATGGAGACACCTGTACGAGGAGAGGACCTGAGAGTCCGGC	1260
QY	1261	CAGCACCGCGCCAGATCGAGAGGCTGCGCAAGCACTGTGCGCTGAGGCTTCAACAC	1320

Db	1255	CAGCACC	CGCCCAAGATCGAGAGCTGGCGAGACCTGGCTGGAGGCTTACCAACC	1314
QY	1321	CCCGACAAGAGCACCAGAAGAGCCCCCTTCTGTGGATGGGCTACAGACTGCACCCC	1380	
Db	1315	CCCGACAAGAGCACCAGAAGAGCCCCCTTCTGTGCCAT-----GAGGTGACCCC	1368	
QY	1381	GACAGTGGACCTGTGAGCCCATCGAGCTGCCGAGAAAGAGAGCTGCACCGTGAACAC	1440	
Db	1369	GACAGTGGACCTGTGAGCCCATCGAGCTGCCGAGAAAGAGAGCTGCACCGTGAACAC	1428	
QY	1441	ATCCAGAAGTGTGGGCAAGCTGAACCTGGGCGAGCAGATCTACCCGAGCTCAAGTG	1500	
Db	1429	ATCCAGAAGTGTGGGCAAGCTGAACCTGGGCGAGCAGATCTACCCGAGCTCAAGTG	1488	
QY	1501	CGCCAGCTGTGAAGCTGCTGGCGGCGCGCAAGGCCCTGCACGACATGTGCTCTGACC	1560	
Db	1489	CGCCAGCTGTGAAGCTGCTGGCGGCGCGCAAGGCCCTGCACGACATGTGCTCTGACC	1548	
QY	1561	GAGAGGCGCAGCTGGAGCTGGGCGAGAACCGCGAGATCTGCGGAGCCGCTGACCGC	1620	
Db	1549	GAGAGGCGCAGCTGGAGCTGGGCGAGAACCGCGAGATCTGCGGAGCCGCTGACCGC	1608	
QY	1621	GTGTACTGACGCCCGACAAGACCTGTGGCCGAGATCAGAAACAGAGGCCACGACAG	1680	
Db	1609	GTGTACTGACGCCCGACAAGACCTGTGGCCGAGATCAGAAACAGAGGCCACGACAG	1668	
QY	1681	TGGAACCTACGAGATCTACAGAGGCGCTTCAAGAACCTGAACCGGCAAGTAAACCCAG	1740	
Db	1669	TGGAACCTACGAGATCTACAGAGGCGCTTCAAGAACCTGAACCGGCAAGTAAACCCAG	1728	
QY	1741	ATGGGCAACCGCCACACCAACGACGTGAAGACGTGACCGAGCGGTGCAGAAATCGCC	1800	
Db	1729	ATGGGCAACCGCCACACCAACGACGTGAAGACGTGACCGAGCGGTGCAGAAATCGCC	1788	
QY	1801	ATGGAGAGCATCTGTGATCTGGGGCAGAAGCCCCCAAGTCCGCTCGCCATCCAGAAGAG	1860	
Db	1789	ATGGAGAGCATCTGTGATCTGGGGCAGAAGCCCCCAAGTCCGCTCGCCATCCAGAAGAG	1848	
QY	1861	ACCTGGGAGACTGTGGACCGACTCTGGCAGGCGCACCTGATCCCGAGTGGGAGTTC	1920	
Db	1849	ACCTGGGAGACTGTGGACCGACTCTGGCAGGCGCACCTGATCCCGAGTGGGAGTTC	1908	
QY	1921	GTGAACACCCCCCTGTGTGAAGCTGTGTGTACAGCTGAGAAAGAGGCCATCATCGGC	1980	
Db	1909	GTGAACACCCCCCTGTGTGAAGCTGTGTGTACAGCTGAGAAAGAGGCCATCATCGGC	1968	
QY	1981	GCCGAGACTTCTACGTGAGCGGCGCGCAACCGGAGACCAAGATCGGCAAGGCGGC	2040	
Db	1969	GCCGAGACTTCTACGTGAGCGGCGCGCAACCGGAGACCAAGATCGGCAAGGCGGC	2028	
QY	2041	TACGTGACCGACCGGGGCGGAGAAAGTCTGAGCTGACCGAGACCAACCAAGAG	2100	
Db	2029	TACGTGACCGACCGGGGCGGAGAAAGTCTGAGCTGACCGAGACCAACCAAGAG	2088	
QY	2101	ACCGAGCTGAGGCGCATCCAGCTGGGCGCTGCGAGCAGCGGAGCGAGGTGAAATCGTG	2160	
Db	2089	ACCGAGCTGAGGCGCATCCAGCTGGGCGCTGCGAGCAGCGGAGCGAGGTGAAATCGTG	2148	
QY	2161	ACCGACAGCGCATCGGCTTGGGCGATCATCAGGCCAGCCCGACCAAGACGACGACGAG	2220	
Db	2149	ACCGACAGCGCATCGGCTTGGGCGATCATCAGGCCAGCCCGACCAAGACGACGACGAG	2208	
QY	2221	CTGGTGAACCAAGTACATCGAGCGAGCTGATCAAGAAAGAGTGAACCTTGAGCTGGGG	2280	
Db	2209	CTGGTGAACCAAGTACATCGAGCGAGCTGATCAAGAAAGAGTGAACCTTGAGCTGGGG	2268	
QY	2281	CCCGCCCAACAAGGCGATCGCGGCAACGAGCAGATGACAACTGGTGAAGCAAGGCGATC	2340	
Db	2269	CCCGCCCAACAAGGCGATCGCGGCAACGAGCAGATGACAACTGGTGAAGCAAGGCGATC	2328	
QY	2341	CGAAGTGCTGTTCTTGGACGCGCATCGATGGCGGCGATCTGATCTTACCAATTCATGAC	2400	



Db	1798	CGCCAGTACACACAGATCCTGTGATCGAGATCTGGGCAAGAAGCCCATCGGCACCGTGCTG	1857
Qy	604	ATGGGCCCCACCCCGTGAACATCATCGGCCGCAACATGCTGACCCAGCTGGCTGGCTGCACC	663
Db	1958	ATGGGCCCCACCCCGTGAACATCATCGGCCGCAACATGCTGACCCAGCTGGGTGTCACC	1917
Qy	664	CTGAATTCCTCCCATCAGCCCCCATCGAGACCGTGTCCCGTGAAGCTGAAGCCCGCATGGAC	723
Db	1918	CTGAATTCCTCCCATCAGCCCCCATCGAGACCGTGTCCCGTGAAGCTGAAGCCCGCATGGAC	1977
Qy	724	GGCCCCAAGGTGAAGCAGTGGCCCTGACCGAGAGAAAGATCAAGGCCCTGACCGGCATC	783
Db	1978	GGCCCCAAGGTGAAGCAGTGGCCCTGACCGAGAGAAAGATCAAGGCCCTGACCGGCATC	2037
Qy	784	TGCGAGGAGATGAGAAAGAGGCGCAAGATCACCAAGATCGGCCCCGAGAACCCCTACAAC	843
Db	2038	TGCGAGGAGATGAGAAAGAGGCGCAAGATCACCAAGATCGGCCCCGAGAACCCCTACAAC	2097
Qy	844	ACCCCCGTGTTGCCCATCAAGAAAGAGGACAGCACCAAGTGGCGCAAGCTGGTGGATTC	903
Db	2098	ACCCCCGTGTTGCCCATCAAGAAAGAGGACAGCACCAAGTGGCGCAAGCTGGTGGATTC	2157
Qy	904	CGGAGCTGAACAGCGCACCCAGACTTCTGGAGGTGCAGCTGGGCATCCCCACCCCC	963
Db	2158	CGGAGCTGAACAGCGCACCCAGACTTCTGGAGGTGCAGCTGGGCATCCCCACCCCC	2217
Qy	964	CGCGCCTGAAGAAAGAAAGACGCTGACCGTCTGACGTGGCGGACGCTACTTCAGC	1023
Db	2218	CGCGCCTGAAGAAAGAAAGACGCTGACCGTCTGACGTGGCGGACGCTACTTCAGC	2277
Qy	1024	GTGCCCCGTGACGAGGACTTTCGCAAGTACACCGCCTTCACCATCCCCAGCATCAACAAC	1083
Db	2278	GTGCCCCGTGACGAGGACTTTCGCAAGTACACCGCCTTCACCATCCCCAGCATCAACAAC	2337
Qy	1084	GAGACCCCCGGCATTCGCTACAGATCAACAGTCTGCCCGAGGCTGGAAGGGCAGCCCC	1143
Db	2338	GAGACCCCCGGCATTCGCTACAGATCAACAGTCTGCCCGAGGCTGGAAGGGCAGCCCC	2397
Qy	1144	AGCATCTTCAGAGCAGCATGACCAAGATCCTGGAGCCCTTCGCGCCCGCAACCCGAG	1203
Db	2398	AGCATCTTCAGAGCAGCATGACCAAGATCCTGGAGCCCTTCGCGCCCGCAACCCGAG	2457
Qy	1204	ATCGTATCTACAGTACATGAGACGACCTGTACGTGGCGAGCGACCTGGAGATCGGCCAG	1263
Db	2458	ATCGTATCTACCA-----GGCCCCCTGTACGTGGCGAGCGACCTGGAGATCGGCCAG	2511
Qy	1264	CACCGGCCAAGATTCAGAGAGCTGGCAAGCATCTGCTGGCTGGGGCTTTCACACCCCC	1323
Db	2512	CACCGGCCAAGATTCAGAGAGCTGGCAAGCATCTGCTGGCTGGGGCTTTCACACCCCC	2571
Qy	1324	GACAAGAAGCACAGAAAGAGCCCCCTTCTGTGGATGGCTACGAGCTGCAACCCCGAC	1383
Db	2572	GACAGNAGACACAGAAAGAGCCCCCTTCTGTCCCAT-----CGAGCTGCACCCGAC	2625
Qy	1384	AAGTGGACCGTGCAGCCCCCATCGAGCTGCCCGAAGGAGAGCTGGACCGTGAACGATC	1443
Db	2626	AAGTGGACCGTGCAGCCCCCATCGAGCTGCCCGAAGGAGAGCTGGACCGTGAACGATC	2685
Qy	1444	CAGAAGCTGTGGGCAAGCTGAACCTGGGCCAGCCAGATTTACCCCGCATCAAGTGGCGC	1503
Db	2686	CAGAAGCTGTGGGCAAGCTGAACCTGGGCCAGCCAGATTTACCCCGCATCAAGTGGCGC	2745
Qy	1504	CAGCTGTCAAGCTGTGGCGCGCCAGGCCCTGACCGACATCTGTGCCCTGACCGGAG	1563
Db	2746	CAGCTGTCAAGCTGTGGCGCGCCAGGCCCTGACCGACATCTGTGCCCTGACCGGAG	2805
Qy	1564	GAGCCGAGCTGGAGCTGGCGGAGAACCGCGAGATCTGTGGCGAGCCGCTGCACGCGTG	1623
Db	2806	GAGCCGAGCTGGAGCTGGCGGAGAACCGCGAGATCTGTGGCGAGCCGCTGCACGCGTG	2865
Qy	1624	TACTACGACCCACGACAGGACCTGTGTGGCCGAGATCCAGAAGCAGGGGCCACGACAGTGG	1683



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Db      2866 TACTACGACCCCGACAGGACCTGTGGCCGAGATTCAGAAACAGGACCGACCCAGCATGG 2925
QY      1684 ACCTTCCAGATCTACAGAGAGCCCTTCAAGAACCTGAGACCGGAGAGTAAGCCCAAGATG 1743
Db      2926 ACCTTCCAGATCTACAGAGAGCCCTTCAAGAACCTGAGAGACCGGAGAGTAAGCCCAAGATG 2985
QY      1744 CGCACCGCCGACACCAAGAGACGATGAGAGAGCTGACCGAGGCGGTGCAAGAGTCGCGCATG 1803
Db      2986 CGCACCGCCGACACCAAGAGACGATGAGAGAGCTGACCGAGGCGGTGCAAGAGTCGCGCATG 3045
QY      1804 GAGAGCATCTGATCTGAGGAGAGAGACCCCAAGTTCCGCTGCGCATTCAGAGAGAGAC 1863
Db      3046 GAGAGCATCTGATCTGAGGAGAGAGACCCCAAGTTCCGCTGCGCATTCAGAGAGAGAC 3105
QY      1864 TGGAGAGCTGTGTGACCGATCTACGAGAGAGCGCAACCTGATCCCGGATGAGAGTTCGTG 1923
Db      3106 TGGAGAGCTGTGTGACCGATCTACGAGAGAGCGCAACCTGATCCCGGATGAGAGTTCGTG 3165
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QY      1984 GAGACCTTCTACGTGTGAGAGCGCGCCCAACCGGAGACCAAGATGCGAGGCGGCTAC 2043
Db      3226 GAGACCTTCTACGTGTGAGAGCGCGCCCAACCGGAGACCAAGATGCGAGGCGGCTAC 3285
QY      2044 GTGACCGAGCGGAGGAGAGATCTGTGAGCTGTGACCGAGACCAAGAGAGAGAGAGAGAG 2103
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; Sequence 32, Application US/10241009
; Publication No. US20030170614A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan
; APPLICANT: LIAN, Ying
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE B
; FILE REFERENCE: 2300-1621.21
; CURRENT APPLICATION NUMBER: US/10/241,009
; CURRENT FILING DATE: 2002-12-13
; NUMBER OF SEQ ID NOS: 68
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 2472
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2Polopr.SF2
US-10-241-009-32

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Query Match      87.1%; Score 2149.6; DB 12; Length 2472;
Best Local Similarity 92.8%; Pred. No. 0;
Matches 2293; Conservative 0; Mismatches 164; Indels 15; Gaps 3;

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QY      184 CACCAATGAAAGATGACACCGAGAGCGCCAGGCAACTTCTTCCGAGAGACTGAGCTTC 243
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QY      244 CCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 303
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QY      304 CGCAGCTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 357
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QY      358 CAGGAGACCTGT-----ACTTCCCGAGATCCTGTGAGCAGCGCCCTGTGTAGC 411
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 Job time : 446.728 secs

GenCore version 5.1.6  
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OM nucleic - nucleic search, using sw model

Run on: October 12, 2003, 11:43:37 ; Search time 113.057 Seconds  
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Scoring table: IDENTITY\_NUC

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Searched: 569978 seqs, 220691566 residues

Total number of hits satisfying chosen parameters: 1139956

Minimum DB seq length: 0

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Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	1599.4	65.1	9772	4	US-09-552-950-5
3	1178.4	48.0	9010	4	US-09-184-418C-8
4	1147.4	46.7	8972	4	US-09-184-418C-9
5	1140.2	45.4	8959	4	US-09-184-418C-11
6	1116.8	45.5	8992	4	US-09-184-418C-4
7	1081.6	44.0	2601	3	US-09-117-217-7
8	1081.6	44.0	2601	3	US-09-117-217-9
9	1081.6	44.0	2601	3	US-09-117-217-11
10	1081.6	44.0	2601	3	US-09-117-217-13
11	1081.6	44.0	2601	4	US-09-735-487-7
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13	1081.6	44.0	2601	4	US-09-735-487-11
14	1081.6	44.0	2601	4	US-09-735-487-13
15	1081.6	44.0	4307	4	US-09-552-950-1
16	1081.6	44.0	9719	4	US-09-700-304-1
17	1080	44.0	9050	4	US-09-184-418C-7
18	1075.2	43.8	7399	2	US-08-418-848A-9
19	1075.2	43.8	9709	2	US-08-188-583-5
20	1075.2	43.8	9709	3	US-08-388-353-1
21	1075.2	43.8	9709	3	US-08-488-551B-1
22	1075.2	43.8	9709	4	US-09-309-572-15
23	1075.2	43.8	12479	4	US-09-318-138-13
24	1075.2	43.8	12494	3	US-08-935-312-13
25	1075.2	43.8	12494	3	US-08-948-760B-33
26	1075.2	43.8	15581	3	US-08-646-538-35
27	1075.2	43.8	15581	3	US-09-503-222-35

28	1074	43.7	3000	4	US-09-184-418C-74	Sequence 74, Appl
29	1070.6	43.6	8968	4	US-09-184-418C-1	Sequence 1, Appl
30	1065.6	43.4	9737	2	US-08-944-449-7	Sequence 7, Appl
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32	1057.6	43.0	8954	4	US-09-184-418C-6	Sequence 6, Appl
33	1052.4	42.8	3017	4	US-09-184-418C-83	Sequence 83, Appl
34	1050.2	42.7	3011	4	US-09-184-418C-101	Sequence 101, App
35	1038.2	42.3	8987	4	US-09-184-418C-2	Sequence 2, Appl
36	1035.2	42.1	8953	4	US-09-184-418C-3	Sequence 3, Appl
37	1034.8	42.1	9060	4	US-09-184-418C-10	Sequence 10, Appl
38	1030.4	41.9	9746	1	US-08-022-835-3	Sequence 3, Appl
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40	1030.4	41.9	9746	2	US-08-647-714-3	Sequence 3, Appl
41	1029.2	41.9	8932	3	US-09-124-900-1	Sequence 1, Appl
42	1029.2	41.9	8933	3	US-08-463-210-4	Sequence 4, Appl
43	1029.2	41.9	8933	3	US-09-620-958A-3	Sequence 3, Appl
44	1029.2	41.9	8933	3	US-09-620-958A-4	Sequence 4, Appl
45	1029.2	41.9	8933	3	US-09-620-958A-9	Sequence 9, Appl

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; Sequence 2, Application US/09552950  
; Patent No. 6541248  
; GENERAL INFORMATION:  
; APPLICANT: Oxford Biomedica (UK) Limited  
; TITLE OF INVENTION: Anti-Viral Vectors  
; FILE REFERENCE: 674524-2004  
; CURRENT APPLICATION NUMBER: US/09/552.950  
; CURRENT FILING DATE: 2000-04-20  
; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 2  
; LENGTH: 4307  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:gagpol-SYNGp - codon  
; OTHER INFORMATION: optimised gagpol sequence  
US-09-552-950-2

Query Match	66.2%;	Score	1626.6;	DB 4;	Length	4307;			
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DB	1206	CCGCAACTGCGAGGCGCCCTTAGAATAAGGCTGCTGGAATGCGCAAGAGGCGCACCA	1265
QY	189	GATGAAGGACTGCACCGAGCGCCAGGCCAACTCTTTCGCGGAGGACTGTGGCTTCCCCCA	248
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ALIGNMENTS

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QY      1725 CAAGTGGCAGAGCGCGCAGACCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1784
Db      2825 CGAGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2884
QY      1785 CGCATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1844
Db      2885 CACGACCGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2944
QY      1845 GAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1904
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Db      3125 CGGCTACGTGACAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3184
QY      2085 GAAAGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2144
Db      3185 GAAAGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3244
QY      2145 CGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2204
Db      3245 CGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3304
QY      2205 CGAGTGTGTGACAGAGATCATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2264
Db      3305 CGAGTGTGTGACAGAGATCATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3364
QY      2265 GGTGCGCGCGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2324
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QY      2325 CATCGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2384
Db      3425 CATCGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3444

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RESULT 2
US-09-552-950-5
; Sequence 5, Application US/09552950
; Patent No. 6541248
; GENERAL INFORMATION:
; APPLICANT: Oxford Biomedica (UK) Limited
; TITLE OF INVENTION: Anti-Viral Vectors
; FILE REFERENCE: 674524-2004
; CURRENT APPLICATION NUMBER: US/09/552, 950
; CURRENT FILING DATE: 2000-04-20

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/ NUMBER OF SEQ ID NOS: 22  
/ SOFTWARE: PatentIn Ver. 2.11

/ SEQ ID NO 5

/ LENGTH: 9772

/ TYPE: DNA

/ ORGANISM: Artificial Sequence

/ FEATURE:

/ OTHER INFORMATION: Description of Artificial Sequence: pSYNGP

US-09-552-950-5

Query Match 65.1%; Score 1599.4; DB 4; Length 9772;  
Best Local Similarity 81.5%; Pred. No. 1.9e-253;  
Matches 1934; Conservative 0; Mismatches 411; Indels 28; Gaps 6;

QY 12 CATGCCGAGGCGCATGAGCCAGG---CCACCAAGCGCCAACTCTCTGATCAGCGAGCAAA 68  
DB 2193 CTTGCTGAGGCGCATGAGCGAGGTGACCAACTCCGCTACCATCATGATGACGGGGGCA 2252  
QY 69 CTTCAAGGGCCCCCAAGCGGATCATCAAGTGTCTCAACTGCGGCAAGGAGGCGCAATGCG 128  
DB 2253 CTTTCGGAACCAACGCAAGATCGTCAAGTGTCTCAACTGTGCAAAAGAGGCGACACAGC 2312  
QY 129 CGGCAACTGCCGCGCCCCCGCAAGAGGGCTGCTGGAGTCCGCGCAAGGAGGCGCACCA 188  
DB 2313 CGGCAACTGCCGCGCCCCCTAGGAAAAGGGCTGTGGAAATGTGAAAAGGAGGACACCA 2372  
QY 189 GATGAAGGACTGCACGAGCGCCAGGCCAACTTCTTCGCGAGGACCTGGGCTTCCGCCA 248  
DB 2373 AATGAAAGATTGATGTAGAGACAGGCTAA-TTTTITAGGAGAGATCTGGCCCTTCCACA 2431  
QY 249 GGGCAAGGCCCGGAGTTCCCGAGGAGCAGAACCCGCGCCAAACAGCCCAACAGCGCGGA 308  
DB 2432 AGGGAAGGCCAGGGAATTTCCTCAGAGCAGACAGCCACAGCCCAACAGGAGAGA 2491  
QY 309 GGTGAGTGCCTGG-----CGACACCCCGCAGCGAGGCGCGCGCGCAGCGCGAGG 362  
DB 2492 GCTTCAGGTTTGGGAAGAGACAAACCTCTCTCAGAAAGCAGGAGCGCGATAGCAAGG 2551  
QY 363 CA-----CCCTGAACTTCCCGCAGATCACCTGTGGCAGCGCCCTCGTGAGCATCAA 416  
DB 2552 AACTGTATCTTTAGCTTCCCTCAGATCACTCTTTGGCAGCGACCCCTCGTCACATATA 2611  
QY 417 GGTGGCGGCCAGATCAAGGAGGCCCTGTGTGACACCGCGCGCAGCACCGCTGTGA 476  
DB 2612 GATAGGGGGCAGCTCAAGGAGGCTCTCTGTGACACCGCGAGCAGACACCGTGTGA 2671  
QY 477 GGAGATGAGCTTCCCGGCAAGTGGAGCCCAAGATGATCGCGGCATCGCGGGTTTAT 536  
DB 2672 GGAGATGTGTTGCCAGGCGCGTGGAAAGCCGAGATGATCGGGGGAATCGCGGGTTTAT 2731  
QY 537 CAAAGTGGCCAGTAGCAGACAGATCTGTATCGAGATCTGCGGCAAGAGGCCATCGGCAC 596  
DB 2732 CAAAGTGGCCAGTAGTACACAGATCTGTATCGAATCTGCGGCCACAGGCTATCGGTAC 2791  
QY 597 CGTGTGATTCGGCCCGCACCCCGTGAAACATCATGCGCGCGCAACATGCTGACCCAGTGG 656  
DB 2792 CGTGTGTGTGGCGCCCGCACACCCCGTCAACATCATCGGACCGCAACCTGTGACCGAGATCG 2851  
QY 657 CTGCACTCTGAACTTCCCGCATCAGCCCGCATCGAGACCGTGCCTGTGAAGTGAAGCCCGG 716  
DB 2852 TTGCAGCTGAACTTCCCGCATTAGCCCTATCGAGACCGGTACCGGTGAAGTGAAGCCCGG 2911  
QY 717 CATGACGCGCCCAAGGTGAAGCAGTGGCCCTGTACCGGAGGAGAGATCAAGGCCCTGAC 776  
DB 2912 GATGACGCGCCGAGGTCAAGCAATGGCCATTGTACAGAGGAGAGATCAAGGCACTGGT 2971  
QY 777 CGCCATCTGCGAGGAGATGGAGAGGAGGCGCAAGATCAACAGATCGGCGCCCGAGAACCC 836  
DB 2972 GGAGATTGCAAGAGATGGAAGAGGAGGAGAAATCTCCAAGATTGGCCCTGAGAACCC 3031  
QY 837 CTACACACCCCGGTGTTCCCGCATCAAGAAAGAGACACCAAGTGGCGCAAGCTGGT 896  
DB 3032 GTACACACCGCGGTGTTCCCGCATCAAGAAAGAGGACTCGACGAAATGGCGCAAGCTGGT 3091

QY 897 GGACTTCCGCGAGCTGAACAAAGCGCACCCAGACTTCTGGGAGGTGCAGCTGGCATCCC 956  
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QY 957 CAACCCCGCGCGCTGAAGAAAGAGAGCGTGAACCTGTGTGAGCGTGGCGAGCGCTTA 1016  
DB 3152 GCACCCCGCAGGGCTGAAGAAAGAAATCCGTGACCGCTACTGGATGTGGTGTGATGCTTA 3211  
QY 1017 CTTGAGCTGCGCTGGGACGAGGCTTCCGCAAGTACACCGCTTCAATCCCGCAGAT 1076  
DB 3212 CTTTCCCTTCCCTGGGACGAGACTTTCAGGAAGTACACTGCTTCAAAATCCCTTCGAT 3271  
QY 1077 CAAACAAAGAGACCCCGGCATCCGCTACAGTACAAACGTGTGCTGCCCGCAGGGCTGAAGGG 1136  
DB 3272 CAACAAAGAGACACCGGGATTCGATATCAGTACAAACGTGTGCTGCCCGCAGGGCTGAAGGG 3331  
QY 1137 CAGCCCCAGCATCTTTCAGAGCAGCATGACAAAGATCTGAGACCTTCCCGCGCCGAA 1196  
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QY 1197 CCGGAGATCTGATCTACCA-----GGCCCCCTGTACGTGGGCGACGACCTGGAGAT 1250  
DB 3392 CCGGACATCTGTCTATCATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3451  
QY 1251 CGGCAGCACCGCGCAAGATCGAGGAGCTGCGCAAGCACCTGTGCTGCGTGGGGTTCAAC 1310  
DB 3452 AGGGCAGCACCGCACCAAGATCGAGGAGCTGCGCAGCACCTGTGTGAGGTGGGACTGAC 3511  
QY 1311 CACCCCCGACAAAGACACCAAGAGGAGCCCGCTTCTTGCCCAT-----CGAGCTGCA 1364  
DB 3512 CACACCCGACAAAGACACCAAGAGGAGCTTCTTCTGATGGGTACGAGCTGCA 3571  
QY 1365 CCGCAGCAAGTGGACCTGAGCCCATCGAGCTGCCCGAGAGGAGAGCTGACCGTGAA 1424  
DB 3572 CCGTGACAAATGGACCGCTGAGCCCTATCGTCTGCGAGAAAGACAGCTGAGACTGTCAA 3631  
QY 1425 CGACATCCAGAAAGCTGGTGGGCAAGCTGAACTGGGCGACGACAGATCTACCCCGGATCAA 1484  
DB 3632 CGACATACAGAAAGCTGGTGGGAAAGTTGAACTGGCCAGTCAAGTTTACCCAGGATTA 3691  
QY 1485 GGTGGCGCAGTGTGCAAGCTGTGCGCGCGCCAAAGCCCTGACCGACATCGTCCCGCT 1544  
DB 3692 GGTGAGGCGAGTGTGCAAACTCTCCGCGGAAACCAAGGCACTCAAGAGGTGATCCCCCT 3751  
QY 1545 GACCGAGAGCGCGAGCTGAGCTGGCGGAGAACCGCGAGATCTGCGCGAGCGCGTGA 1604  
DB 3752 AACCGAGAGCGCGAGCTGGAACCTGGCAGAAACCGAGAGATCTCTAAAGGAGCCCGTGA 3811  
QY 1605 CGGCTGTACTACACCCCGCAGGACCTGGTGGCCGAGATCCCAAGAGCAGGCGCACGA 1664  
DB 3812 CGGCTGTACTATGACCCCTCCAGGACCTGATCGCCGAGATCCAGAGAGGCGCAAGG 3871  
QY 1665 CAGTGGACCTACAGATCTACAGGAGCCCTTCAAGAACCTGAAAGACCGGCAAGTACGC 1724  
DB 3872 CCAGTGGACCTATCAGATTTACAGGAGCCCTTCAAGAACCTGAAAGACCGGCAAGTACGC 3931  
QY 1725 CAAAGTGCACCGCCCAACAGCAGCTGAAGCAGCTGACGAGCGCGTGCAGAAAGAT 1784  
DB 3932 CCGGATGAGGGGTGCCCACTTAACGAGCTCAAGCAGCTGACCGAGGCGCTGCAGAAAGAT 3991  
QY 1785 CGCCATGAGAGCATCTGTGATCTGGGGCAAGACCCCAAGTTCCGCTTCCCATCCAGAA 1844  
DB 3992 CACACCGAAAGCATCTGTGATCTGGGAAAGATCTCTAAGTTCAAGCTGCCATCCAGAA 4051  
QY 1845 GGAGACCTGGGAGACCTGTGTGACCGCACTACTGGCAGGCCACCTGGATCCCGAGTGGGA 1904  
DB 4052 GGAAACCTGGGAAACCTGTGTGACAGAGTATTGGCAGGCCACCTGGATTCTCTGAGTGGGA 4111  
QY 1905 GTTGTGAAACCCCGCTGGTGTGAGTGTGTTACAGCTGGAGAGGAGGCCCATCAT 1964  
DB 4112 GTTGTGAAACCCCGCTGGTGTGAGTGTGTTACAGCTGGTGTGAGAGGAGGCCCATAGT 4171

QY	254	AGGCGCGGAGTTCCCGCAGGACAGACACCGCGCCAAACAGCCCAACGACCGGAGAGTGC	313
Db	1460	AGGCGCAGGGAGATTTCCTTCAGAACAGGCGCAGAGCCAAACAGCCCAACGACGAGAGTTCC	1519
QY	314	AGGTCGCGCGCGACAAACCCCGCAGAGCGAGCGCGCCGACCGCCACAGGCGACCCCTGACT	373
Db	1520	AGGTTCCAGSAGACACACCCCGCTCCGAGCAGSAGTCGAAAGACAGGGAAGCTTACT	1579
QY	374	TCCCCCAGATCAACCCTGTGGCAGCGCCCTCTGTAGCATCAAAGTTGGCGGCCAGTCA	433
Db	1580	TCCCTCAATCACTCTTTGGCAGCGACCCCTTGCTCAATAAAGGTAGGAGGCAATATA	1639
QY	434	AGGAGGCCCTCTGCTGGACACCGGCGCCGACACCGTCTGGAGSAGATGACCTGCCCG	493
Db	1640	AGGAGGCTCTCTTAGCACCGSAGACAGGTATACAGATTAGAAAGAAATTTTGGCAG	1699
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QY	554	ACCAGATCCTGATCGAGATCTGGCGCAAGAAAGCCATCGGACCCGTGATCGGCCCA	613
Db	1760	ATCAAAATACCTATGAGAAATTTGGAAAAAAGGCTATAGTACAGATTATGAGGACTTA	1819
QY	614	CCCCCGGACATCATTCGGCCCGAACATGCTGACCCAGCTGGGCTGCAACCTGACCTCC	673
Db	1820	CACCTGCAACATPATTTGGAAGAAATATGTTGCTCAGCTTGATGACACTPAATATTTCC	1879
QY	674	CCATCAGCCCCATCGAGACCGTCGCCGTGAGCTGAAAGCCCGCATGAGACGSCCCCAAG	733
Db	1880	CATTTAGTCCATTTGAAACCTGTACAGTAAATTAATTAAGCCAGSATTGATGGCCCAAGG	1939
QY	734	TGAAGCAGTGGCCCCCTGACCCGAGSAGAAAGATCAAGSCCTGACCGCATCTGCGAGAGA	793
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QY	1034	ACGAGGACTTCGCGAAGTACACCGCCTTCAACATCCCCACGATCAACAAGAGACCCCG	1093
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QY	1154	AGAGCAGATGACCAAGATCCTGGAGCCTTCGCGCGCCGCAACCCCGAGTCTGTACT	1213
Db	2360	AGAGTACAGACAAAATCTTAGAGCCCTTCAGGCGACAAAATCCAGACATATGACTCT	2419
QY	1214	ACCA-----GCGCCCTGTAGCGTGGCAGCGACTGAGATGGCCAGACCGCGCA	1267
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QY	1268	AGATCGAGGAGCTGCGAAGCACTGTGCGCTGGGCTTCAACACCCCGACAAAGAC	1327
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QY 1328 ACCAGAGGAGCCCTTCTCTGCCCAT-----CGAGCTGACCCCGACAAAGTGGACG 1381
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QY 2162 AGCCCTGGGATCATCCAGGCCCGCAGCAAGAGCAGAGCAGCTGTTGACACAGA 2221
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Db 3560 TTCTAGATGGAATAGA 3575
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US-09-184-418C-9
; Sequence 9, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 9
; LENGTH: 8972
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; 137.1632:gag; 1419.4435:pol;
; OTHER INFORMATION: 4380.4958:vif; 4898.5188:vpr; 5169.7814:tat;
; OTHER INFORMATION: 5308.7938:rev; 5407.5667:vpu; 5585.8128:env;
; OTHER INFORMATION: 8130.8753:nef
US-09-184-418C-9

Query Match 46.7%; Score 1147.4; DB 4; Length 8972;
Best Local Similarity 69.3%; Pred. No. 1.5e-179;
Matches 1647; Conservative 0; Mismatches 696; Indels 32; Gaps 5;

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QY 74 AGGCCCCAGAGCGCATCATCAAGTCTTCACTCGGCGAGAGAGGCCACATCGGCCCA 133
Db 1274 AAGCCCTTAAAGAAATGTTAAATGTTTCACTGTGGCAGGAAAGGCGATATAGCCAGA 1333
QY 134 ACTCGCGGCCCCCGCAAGAGGCTGCTGGAAGTGGCGAAGGAGGCCACAGATGA 193
Db 1334 ATTGAGGGCTTCTGGGAAAGAAAGCTGTTGGAATGTGGAAGAGGAGACCAAAATGA 1393
QY 194 AGGACTGCACCGAGCGCCAGGCCCAACTTCTTCCGCGAGGACCTGGCCCTTCCCGCAGGCA 253
Db 1394 AAGACTGTACTGAGACAGAGCTAA-TTTTITAGGAAATTTGGCCTTCCAGAGGGG 1452
QY 254 AGGCCCGGAGTTCCTCCAGCGAGCAG-----AACCGCGCAACAGCC 295
Db 1453 AGGCCGGGGAATCTCTTCAGACAGACAGCCAGGCCAACAGCCCCACAGCTCCACAGCC 1512
QY 296 CCACAGCCGCGAGCTGCGGCGAGTGGCGGACACACCCCGCAGCGAGCCGCGCGGAGC 355
Db 1513 CCACAGCAGAGAGCTTCAGGTTGAGGAGACACCCCTGCGCGAGCAGAGCAGAGAAA 1572
QY 356 GCCAGGCGACCTTGAACCTTCCCGCAGATCACCTGTGSCAGCGCCCTTGGTGAGCATCA 415
Db 1573 GACAAGGAACCTTAACTGCTCCCTCAAATCACTTTTGGCAGCGACCCCTTGTCTCAATAA 1632
QY 416 AGTGGGCGGCGCAGATCAAGAGGCCCTGTGAGACACCGGCGCCGACAGACCGTGTGG 475
Db 1633 AAGTAGGGGTTCAGATAAAGGAGCTCTCTTTGGATACAGGAGCAGATGATCAGATTAG 1692
QY 476 AGGAGATGAGCTCGCCGCGCAAGTGGAGGCCAAGATGATCGCGGCATCGCGCTTCA 535
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QY 536 TCAAGGTGCGCCAGTACAGACAGATCTCTGATCGAGATCTGCGGCAAGAGGCCATCGGCA 595
Db 1753 TCAAGTAAAGACATGATCAATACTATTAGAAATTTGTGGAAGAAAGAGCTATAGTA 1812
QY 596 CCGTGTGATCGGCCCAACCCCGTGAACATCATCGGCCGCAACATGCTGACCGAGTGG 655
Db 1813 CAGTATTAGTAGGACCTACACCTGTCAACATAATTTGGAGAGAAATATGTTGACCAGCTTG 1872
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QY	656	GCTCAGCCCTTAACCTTCCCCATTCAGCCCCATTCAGACCGCTCCGCTGAGCTGAAAGCCG	715
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Db	1933	GAATGGAATGCGCCCAAGGGCTCAAAACAATGGCCATTGACGAGAAATAAATTAACATTTAA	1992
QY	776	CCGCGCATCTGCGAGAGATGGAAGAAAGGGCCAAAGATCAACAAGATGCGGCCGAGAAC	835
Db	1993	CAGCAATTTTGGAAGAAATGGAAAAAGAGAAAAATTTACAAAATTTGGCCTTAGAATTC	2052
QY	836	CCCTCAACACACCCCGCTGTGCGCATCAAGAAAGAGACAGCACACCAAGTGGCGCAAGCTGG	895
Db	2053	CATTATACACTCCAGTATTTTCCATTATTAAGAAAGACAGTACTAAGTGGAGAAATTAG	2112
QY	896	TGGACTTCCGCGAGCTGAAACAAGCGCACCCAGACTTCTGGAGGTGCACTGGGCATCC	955
Db	2113	TAGATTTTCAGGAACTCAATTTAAAAAGACTCAGGACTTTTGGAAAGTTCAATTAGAAATAC	2172
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QY	1016	ACTTGAAGGTGCCCCCTGGAGCGAGACTTCCGAAAGTACACCGCTTCAACATCCGACGA	1075
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QY	1076	TCACCAACGGAACCCCGGCAATCCGCTCCACAGTCAACAGTGCCTGCCCCAGGAGCTGAAG	1135
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QY	1136	GCAGCCCCGACGATCTTCCAGAGCAGCATGACCAAAATCTGAGCCCTTCCGCGCCGCA	1195
Db	2353	GATCACCATCAATATTTCCAGAGTAGCATGATTAATAATCTTGAAGCCCTTAGACACAATA	2412
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Db	2413	ACCCAGAAATGTTATCTATCTATCAATATATGATGACTTGTATGTAGATCTGATTTAGAAA	2472
QY	1250	TCGGCCAGCACCGCGCCAAAGATCGAGAGCTGCGCAACACTGTGCTGGGGCTTCA	1309
Db	2473	TAGGGCAACAAGAGCAAAAATAGAGGGATTAAAGAAACACCTATTTGATGGGGATTTA	2532
QY	1310	CCACCCCCGAGAAAGAGACCAAGAGAGAGCCCCCTTCTGCGCAT-----CGAGCTGC	1363
Db	2533	CTACACAGACAAGAAAGCATGAAAGAGGCCCATTTCTTGGATGGGATATGAATCTCC	2592
QY	1364	ACCCCGACAAGTGGACCGTGCAGGCCCATCGAGCTGCCGAGAAAGAGAGCTGGAACCTGA	1423
Db	2593	ATCTGACAATGAGCANATCAGCCTTATTAAGCTGCCAGAAAAGAGAGCTGGAAGTCA	2652
QY	1424	ACGACATTCAGAAAGCTGTGTGGGCAAGCTGAACTGGGCCAGCCAGATCTAACCCCGCATCA	1483
Db	2653	ATGATATACAAAGATTAGTGGAAAAATTTAACT--GGCAAGTCAGATTATACGAGGATTA	2711
QY	1484	AGTGGCGCCAGCTGTGCAAGCTGTGCTCGCGGGCCAAAGCCCTGCACGACATCTGGGCCCC	1543
Db	2712	AAGTAAGGCACTGTGTAACTCTTBAAGGAGCCAAAGCACTAACACATATGATACAT	2771
QY	1544	TGACCGAGAGAGCCGAGCTGAGAGCTGSCCGAGAAACCGAGATCTCTGCGAGAGCCGTGC	1603
Db	2772	TGACTGTAAGAGCGAATTAGAATTTGGAGAGAGCAGGAGAAATTTTAAAGAACACAGTAC	2831
QY	1604	ACGCGAGTACTAAGAACCCAGCAAGAGACTGTGTGGCCGAGATTCAGAAAGCAGGGCCACG	1663
Db	2832	ATGGAGTATATTATACCCATCAAAAGACTTATATGCTGAAATACGAAACAAAGGCAATG	2891
QY	1664	ACCAAGTGAACCTACCAAGATCTTACAGAGAGCCCTTACAGACCTGTAAGACCGGCAAGTACG	1723
Db	2892	ACCAATGAGACATATCAAGTTTACCAAGAACCATTTCAAAAATCTGAAAAACAGAAAGTATG	2951
QY	1724	CGAAGATGCGACCGCCCAKACCAAGACGTGAAGACGTGACCGAGGCGCTGACAGAAAG	1783

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Db      2952  CAAAAATGAGACCTGCCCACTAATATGATGTAAACAGTTAACAGAGGCGGTGCAAAAAA 3011
QY      1784  TCGCCTATGGAGAGCATGTGTATCTGGGGCAAGACCCCAAGTTCCGCTGCCCATCCAGA 1843
Db      3012  TAGCCATGGAAAGCATATGTAAATGGGAAAGATTCTTAATTTAGGCTACCCATTCAAA 3071
QY      1844  AGGAGACCTGGAGACCTGGTGGACCGACTACTACTGGGAGGCGACCTGGATCCCGAGTGG 1903
Db      3072  AAGAAACATGGAGACATGGTGGACAGACTATTTGGCAAGCCACTGGATTCTGAGTGGG 3131
QY      1904  AGTTCTGTAACACCCCCCCCCCTGTGAAGCTGTGTACCACTGGAGAGAGAGCCCATCA 1963
Db      3132  AGTTGTTAATAATCTCCCCCTAGTAAATTAATGTGTCCAGCTGGAGAAAGAACCCATAG 3191
QY      1964  TCGGCGCCGAGACCTTCTACTGTGACGGCGCCGCCCAACCCCGAGACCAAGATCGGCAAG 2023
Db      3192  CAGGAGCAGAAACTTACTATGTGTAGTGAAGCAGCCAAATGAGGAAACTTAAATATGGAAGA 3251
QY      2024  CCGGCTACGTAGACCGGACCGGGGCGGAGAAAGATTCGTGACCTGTGACCGAGACCAAC 2083
Db      3252  CAGGGTATGTGTACTGACAGAGGAAGCAAAAAATTGTTACTCTAATGAAACAACAAATC 3311
QY      2084  AGAAGACCGAGCTGTACAGCCCATCCAGCTGGCCCTGTGAGACAGGGGAGCAGAGGTGAACA 2143
Db      3312  AAAAGACTGTAATTAACAAGCAATTAGTTAGCTTTGCAAGGATTCAAGATCAGAAATTAACA 3371
QY      2144  TCGTAGCCGACAGCCGACCAATAGCCCTGTGGGACATCATCCAGGCCACGCCGACAGAGCAGA 2203
Db      3372  TAGTAACAGACTCACTACATTAAGCATTTAGGAATCATCCAGACAAACAGATAGAGTGAAT 3431
QY      2204  GCGAGCTGTGTAACCAATCATCGAGCAGCTGATCAAGAAAGAGAGAGTGTACTGTAGCT 2263
Db      3432  CAGAAATTAAGTCAACAAATATATAGAAACAGTGTATAAAAAGGAAAGGGTTTAACTGTGAT 3491
QY      2264  GGGAGCCCGCCCAACAAAGGAGATCGGCGGCAACGACGATCGACAACCTGGTGAAGCAGG 2323
Db      3492  GGGATACAGACACAAAGAAATTTGAGAGAAATGAAACAGATAGTAATTTGGTAATGTGTG 3551
QY      2324  GCATCCGCAAGTGTCTGTTCTCTGAGCGCATTCGAT 2358
Db      3552  GAATCAGGAAAGTGTCTGTTCTTATGATGAATAGAT 3586

RESULT 5
US-09-184-418C-11
/ Sequence 11, Application US/09184418C
/ Patent No. 6492110
/ GENERAL INFORMATION:
/ APPLICANT: Hahn, Beatrice
/ APPLICANT: Gao, Feng
/ APPLICANT: Shaw, George
/ TITLE OF INVENTION: CLONING AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
/ FILE REFERENCE: D6287
/ CURRENT APPLICATION NUMBER: US/09/184,418C
/ CURRENT FILING DATE: 1999-11-02
/ NUMBER OF SEQ ID NOS: 112
/ SEQ ID NO 11
/ LENGTH: 8959
/ TYPE: DNA
/ ORGANISM: Human immunodeficiency virus type 1
/ FEATURE:
/ OTHER INFORMATION: isolate=94IN476.104; 138.1613;"gag";
/ OTHER INFORMATION: 1418.4428;"pol"; 4361.4939;"vif"; 4879.5169;"vpr";
/ OTHER INFORMATION: 5150.7782;"tat"; 5289.7939;"rev"; 5378.5638;"vpu";
/ OTHER INFORMATION: 5556.8129;"env"; 8131.8754;"nef
US-09-184-418C-11

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Query Match	46.4%	Score 1140.2;	DB 4;	Length 8959;
Best Local Similarity	69.2%;	Pred. No. 2.2e-178;		
Matches 1632;	Conservative	0;	Mismatches 708;	Indels 17;
				Gaps 5;



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Db      3371 ATGCATTGGAATCATCTTCAAGACCAACAGATAAAGTGAATCAGATTAGTCAACCAA 3430
QY      2222 TCATGAGCAGCTGATCAAGAGAGAGAGTGTACCTGAGCTGGTGCCTCCCAAGG 2281
Db      3431 TATATGACATTAATTAACCAAGAAAGTGTCTATCTGTCATGGTACCAGACATTAAG 3490
QY      2282 GCATGGCGGCAAGCAGACATGCAACAGCTGATGACCAAGGCAATCCGCAAGTGTGT 2341
Db      3491 GAATTGGAGGGAATGAACAGATAGATAGATTAGTGAATGAGTAATGGAAGTACTGT 3550
QY      2342 TCTTGAGCGCATTCAT 2358
Db      3551 TTCTGATGGATAGAT 3567

RESULT 6
US-09-184-418C-4
; Sequence 4, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 4
; LENGTH: 8992
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RM09; 139.1624; gag; 1690.4428; pol (N-terminus uncertain
; OTHER INFORMATION: 4373.4951; vif; 4891.5181; vpr; 5182.7801; tat; 5301.7958; rev;
; OTHER INFORMATION: 5403.5648; vpu; 5566.8148; env; 8150.8773; nef
; US-09-184-418C-4

Query Match      45.5%; Score 1116.8; DB 4; Length 8992;
Best Local Similarity 68.3%; Pred. No. 1.5e-174;
Matches 1612; Conservative 0; Mismatches 732; Indels 16; Gaps 4;

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Db      1640 TAAAGAAAGCTTATAGATACAGAGCAGATGATACATATTAAGAAATTAATTTGC 1699
QY      491 CCGGCAAGTGGAGCCCAAGATGATCGCGGCAATCGCGCTTATCAAGTGGCCAGT 550
Db      1700 CAGAAATGGAACCAAAATGATAGGGGAATTGAGGTTTATCAAGGTAAACAGT 1759
QY      551 ACGACAGATCTGTATGAGATCTGCGGCAAGAGGCAATCGGACCGTGTGATCGGC 610
Db      1760 ATGATCAAAATCTTATGAATTTGTGTGAAAAAAGGCTATATGATACATTTAGTAGAC 1819
QY      611 CCACCCCGTGAATCATATGCGCGCAACATGCTGATACCAGCTGGCTGACCTGAACT 670
Db      1820 CTACATCTGTCAACATTAATGGAAGAAATATGTTGACCGAGATGTGTACTTTAACT 1879
QY      671 TCCCATAGCCCATGAGAGCGGTGCCCGGTAAGCTAAGCCCGGATGAGACGCCCA 730
Db      1880 TTCCAAATTAGTCTTATGAGCTGTATACAGTAGCATTTAAACCGAAGTGTGCCCCA 1939
QY      731 AGGTGAAGCAGTGGCCCCCTGACCGAGGAGATCAAGGCCCTGACCGCATCTGCGAG 790
Db      1940 AGGTTAAACATGCGCATGTACAGAGAAAAATTAAGCATTTAAGGAATTTGTACAG 1999
QY      791 AGATGAGAGAGAGGCGCAATCAACCAAGATCGGCCCGGACCCCTTACAAACCCCG 850
Db      2000 AAATGGAAGAAAGAGGAAAAATTTCAAAAATCGGGCTGAAAAATCCATATTAACCTCCAG 2059
QY      851 TGTTCGCATCAAGAAAGAGAGACAGACCAAGTGGCGCAAGCTGTGACTTCCGCGAGC 910
Db      2060 TATTTGCCATTAATAAAGAGAGACAGTACTAATGAGAAAAATTGTAATTTCCAGGAGAC 2119
QY      911 TGAACAAAGCGCACCCAGAGACTTCTGGAGGTGCAAGCTGGGCAATCCCCACCCCGGCGC 970
Db      2120 TCAACAAAAGAACTCAAGACTTTTGGGAAGTCCATTTAGGATTAACCAACCCAGAGGCT 2179
QY      971 TGAAGAGAAAGAAAGCGTGAACGCTGTGACAGTGGGGAAGCCCTTATTCAGCGGCC 1030
Db      2180 TAAAGAAAGAAATCAATGACATGACATGATGATGGGGAATGACATCTTCAAGTCTT 2239
QY      1031 TGAAGAGAGACTTCGCAAGTACACCGGCTTCAACATCCCGAGATCAACACAGAGACC 1090
Db      2240 TAGATGAGAGCTTGAGGAAATATATCTGATTCACATCTCAGTATTAACATGAAACAC 2299
QY      2300 CAGAAATTAGGTATCAATATATGTGCTTCCACAGGGATGGAAGATCACACAGCAATAT 2359
Db      1151 TCCAGAGAGCATGACCAAGATCTGAGAGCCCTTCCGGCCCGCAACCCCGAGATCGGA 1210
Db      2360 TCCAAATATGATGACAAAAATCTTAAGGCCCTTTAAGGGCACAAAACCAAGAAATATGTA 2419
QY      1211 TCTACCA-----GACCCCTGTACGTGGGCAAGCCTGAGATCGGCAAGCACCGG 1264
Db      2420 TCTATCAATATATGATGAGCTGTGATGATGATGATGATGATGATGATGATGATGATGAT 2479
QY      1265 CCAAGATGAGAGAGCTGGCAAGCACTGCTGCGCTGGGGCTTCAACACCCCGCAAGA 1324
Db      2480 CAAAATAGAGAGTTAAGAGACATCTATTAAGTGGGGATTAAACACACACAGCAAGA 2539
QY      1325 AGCAACGAGAGAGAGCCCTTCCGSCCAT-----GAACTGACCCCGCAAGATGTA 1378
Db      2540 AACATCAAGAAAGACCTCAATTTCTTGGATGGGGTATGAACCTTCATCTTCAAAATGTA 2599
QY      1379 CCGTGAAGCCCATGAGCTGCGCGAGAGAGAGAGTGAACCGTGAACGATCCGAAGC 1438
Db      2600 CAGTAAACCTATACGTGTCABAAAAGATATCTGACGTCAATATATACAGAGT 2659
QY      1439 TGTGGGCACTGAATCTGGGCAAGCAGATCTAACCCCGCATCAAGTGGCGCACTGT 1498
Db      2660 TAGTGGGAAATTAATCACTGGGCAAGTCAAGTTTACCAAGGGGTAAAGTTAAGGCAATGT 2719
QY      1499 GCAAGCTGCTGGGGGCGCAAGGCCCTGACCCGACATGTGTCCCTGACCAAGAGGCG 1558
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QY 1559 AGCTGAGCTGGCCGAGAACCGGAGATCTGCGGAGCCCGTGCACGGCGTGTACTAG 1618
Db 2780 AATTAGAAATGGCAGAAACAGGGAATTTTAAAGAACACGATACATGAGTATATTATG 2839
QY 1619 ACCCAGCAAGGACCTGGTGGCGGAGATCAGAAAGCAGGGCCACGACCACTGACCTACC 1678
Db 2840 ACCCATCAAAGACTTAATAGCTGAAATACAGAAACAGGGGATGACCAATGGACATATC 2899
QY 1679 AGATCTACAGGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCAAGATGCGGACCG 1738
Db 2900 AAATTTACCAAGAACATTTCAAPAAATCTGAAAACAGGAAAGTATGCAAAAAGGAGACTG 2959
QY 1739 CCCACACCAACGAGTGAAGCAGCTACCGAGGCGCTGAGAAAGATCGCCATGGAGACA 1798
Db 2960 CCCACACTAATGAGCTAAACAGTTAACAGAGCAGTGCAAAAGATAGCATGGAAAGCA 3019
QY 1799 TCGTGAATCGGGGCAAGACCCCAAGTTCCGCTGCCCATCAGAAAGGAGACCTGGAGA 1858
Db 3020 TAGTAATATGGGAAAGACTCTCTAAATTTAGATTACCCATCCAGAAAGAAACATGGAAA 3079
QY 1859 CCGTGTGACCCACTACTGCGAGGCCACCTGGATCCCGAGTGGGAGTTCTGTGAACACC 1918
Db 3080 CATGTGTGACACACTATTGGCAAGCCACCTGGATTCTCGTGGGAGTTTGTTAATACCC 3139
QY 1919 CCCCCTCTGTGAAGCTGTGTTACCACTGGAGAGGAGCCCATCATCGGCGCCGAGACCT 1978
Db 3140 CTCCTCTAGTAATATATGTTACCACTAGAGTAGAAGAACCCATATTAGGAGCAGACTT 3199
QY 1979 TCTAGTGAACCGGCGCCCAACCGGAGACCAAGATCGGCAAGCGCGCTACGTGACCG 2038
Db 3200 TCTATGTAGATGGAGCAGCTAATCGGGAACCTAAAAATAGGAAAGCAGGGTATGTTACTG 3259
QY 2039 ACCGGGCGCGCAGAGATCTGTGAGCTGACCGAGACCCACCAACAGAGACCGAGCTGC 2098
Db 3260 ACAGAGGAAGGCAGAAAAATGTTTCTTAACCTGAAACAAATCAGAAAGCTGAATTAC 3319
QY 2099 AGGCCATCCAGCTGGCGCTGCAGGACAGCGGCGAGGAGTGAACATCTGTGACCGACAGC 2158
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QY 2159 AGTAGCCCTGGGCAATCTCAGGCGCCAGCCGACAGAGCAGAGCGAGCTGGTGAAC 2218
Db 3380 AGTATGCTATTAGGAATCAATTAAGCACACCAAGATAGCAGCGAATCGGAGGCGAGTCA 3439
QY 2219 AGATCATCGAGCAGCTGATCAAGAGGAGAAAGTGTACCTGAGCTGGTGGCGGCCACA 2278
Db 3440 AAATAATAGAACAGTTAATAAAAAAGGAAAGAGTCTACCTGTCTATGGGTACCAGCACATA 3499
QY 2279 AGGGCATCGGCGGCAACGAGCAGATCGACAAGCTGTGAGCAAGGCGCATCCGCAAGGTGC 2338
Db 3500 AAGGAATTGGAGAAATGAACAAGTAGATAAATTAGTAGTAGTGGAAATCAGGAGGTGC 3559
QY 2339 TGTCTGTGACCGGCTCGAT 2358
Db 3560 TGTCTGTGATGGAATAGAT 3579
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## RESULT 7

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US-09-117-217-7
; Sequence 7, Application US/09117217
; Patent No. 6221578
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Kurt
; APPLICANT: PAUWELS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; TITLE OF INVENTION: OF HUMAN HIV STRAINS
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/117,217
; CURRENT FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 15
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; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(492)
; OTHER INFORMATION: gag Polyprotein
US-09-117-217-7
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Query Match 44.0%; Score 1081.6; DB 3; Length 2601;
Best Local Similarity 67.9%; Pred. No. 7.6e-169;
Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;
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QY 14 TGGCGGAGCCCATGAGCCAGGCCACCA---GGGCCAACATCTCTGATGAGCGCAGCAACT 70
Db 77 TGGCTGAAAGCAATGAGCCCAAGTAACAAATTCAGCTACCATATGATGAGAGAGGCAATT 136
QY 71 TCAAGGGCCCCAAGCGCATCATCAAGTCTTCAACTGCGGCAAGGAGGCGCCACATCGCCC 130
Db 137 TTAGAAACCAAGAAAGATTGTTAAGTGTTCATTTGGCAGAAAGAGGACACAGCCA 196
QY 131 GCAACTGCGCGCCCCCGCCCAAGAGGCTGCTGGAAGTGGCGCAAGGAGGCGCCACCA 190
Db 197 GAAATTGAGGGCCCCCTAGGAAAAGAGGCTGTTGGAATGTGGAAGAGGAGACCCAAA 256
QY 191 TGAAGACTGACCGAGCGCCAGGCCAACTTCTTCGGGAGGACCTGGCTTCCCGCAGG 250
Db 257 TGAAGATTGACTGAGAGACAGGCTAA-TTTTATAGGGAAGATCTGCGCTTCTTACAA 315
QY 251 GCAAGGCCCGCGAGTTCCCGAGCAGCAGAAACCGGCCCAACAGAGCCCGCCAGCGCGAGC 310
Db 316 GGAAGGCCAGGGAATTTTCTCAGAGCAGACAGAGGCCAACAGCCCCCAGCAAGAGAGC 375
QY 311 TGCAGTTCGCGCG-----CGAACACCCCGCAGCAGCGCGCGCGCCGAGCGCCAGGGCA 364
Db 376 TTCAGTCTGGGTAGAGACAACAACTCCCTCAGAGAGCAGAGCCCGATAGACAGGAA 435
QY 365 -----CCCTGAACCTTCCCGCAGATCACCTGTGGCAGCGCGCCCTGTGTAGCATCAAG 418
Db 436 CTGTATCTTTAACTTCCCTCAGGTCATCTTTTGGCAACGACCCCTCGTCAATAAAGA 495
QY 419 TGGCGGCGCAGATCAAGAGGCGCTGTGGACACCGGCGCCGACGACACCGCTGCTGGAGG 478
Db 496 TAGGGGGCACTAAAGAGCTCTATTAGATACAGGAGCAGATGATACAGTATTAGAG 555
QY 479 AGATGAGCTTCCCGGCAAGTGGAAAGCCCAAGATGATCGGGGCGCATCGCGGCTTCATCA 538
Db 556 AAATGAGTTTGCAGGAAGATGGAACCCAAATGATAGGGGGAATTGGAGGTTTTATCA 615
QY 539 AGGTGCGCGAGTACGACCGAGATCTGTGATCGAGATCTGCGGCAAGAGGCCATCGGCACCG 598
Db 616 AAGTAAGACATGATGATCAGATCTCATAGAAATCTGGAACATAGAGCTATAGTACAG 675
QY 599 TGCTGATCGGCGCCACCCCGTGAACATCATCGGCGCAACATGCTGACCCAGCTGGGCT 658
Db 676 TATTAGTAGACCTACACCTGTCAACATAANTGGAGAAATCTGTGTACTAGATTGTT 735
QY 659 GCACCTGAACTTCCCATCAGCCCATCGAGACCGTCCCGCTGAAGCTGAAGCCCGCA 718
Db 736 GCACCTTTAAATTTCCCATTAGCCCTATTGAGACTGTACCAAGTAAATAAAGCCAGGAA 795
QY 719 TGGACGGCCCCAAGGTGAAGCAGTGGCCCTGACCGGAGAGAGATCAAGGCCCTGACCG 778
Db 796 TGGATGGCCCCAAAAGTTAAACAATGGCCATTGACAGAGAGAAAAATAAAGCATTAGTAG 855
QY 779 CCATCTGGAGGAGATGAGAGAGGAGGCAAGATCACCAAGATCGGCCCGCCAGAACCCCT 838
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QY 839 ACAACACCCCGCTGTTCGCCATCAAGAAAGAGGACAGCACCAAGTGGCGCGAGCTGGTG 898
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Db 916 ACAATATCCAGTATTTGGCATTAAGAAAAAGACAGTACTAATGAGAAAAATTAGTAG 975  
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 Db 899 ATTTAGAGAACTTTAATAGAGAACTCAAGACTTCCTGGGAGGTCAATTTAGAAATACAC 1035  
 QY 959 ACCCCGCGGCTGAAAGAAAGAAAGAGCGTGCCTGCTGAGCGTGGCGCAGCGCTACT 1018  
 Db 1036 ATCCGCGAGGCTTAATAAAGAAAAAATAGTAAGTACTGAGTGGGTGATGCAATTT 1095  
 QY 1019 TCAGGTGCTCCCTGAGACAGGACTTCCTGCAATACCGCTTCACATCCCGACATCA 1078  
 Db 1096 TTTCACTTCCTCTTAATGATGAGACTTCAGGAGTATACCTGCAATTTACATCTACTATATA 1155  
 QY 1079 ACAAGAGAGCCCCCGGACATCCGCTACAGTACAGTGTGCTCCAGCGCTGGAGGGCA 1138  
 Db 1156 ACAATGAGACACCAAGGAGTATGATATCAGTACAAAGTGTCTTCAAGGAGTGGAAAGAT 1215  
 QY 1139 GCCCGAGCATTTCCAGAGCAGCATGACCAAGATCCTGAGGCTTCGCGCGCCCAAC 1198  
 Db 1216 CACGAGCAATATTCAAAGTAGCATGACAAAATCTTAGAGCTTTTGAAGAAAGAAATC 1275  
 QY 1199 CCGAGATGTGATCTACCA-----GGCCCCCTGTAGTGGGCGACGACCTGGAGATCG 1252  
 Db 1276 CAGATAGTATATCTATCATATACATGATGATTTGTATGTAGATCTGACTTAAGAAATAG 1335  
 QY 1253 GCCAGCACCGGCGCAGATTCAGAGAGCTGCGCAACACCTGCTGCGCTGGGCTTCAACA 1312  
 Db 1336 GGAGCATAGAACAAATATAGGAGAGCTGAGCAACATCTGTGAGTGGGAGCTTACCA 1395  
 QY 1313 CCCCCGACAGAGACCAAGAAAGAGCCCCCTCTCTGCCAT-----CGAGCTGACCC 1366  
 Db 1396 CACGAGACAAAACATCAGAAAGAACCTCCATCTTGTGATGGGTATATGAACTCCATC 1455  
 QY 1367 CCGAAGTGGAGCCCTGACGCCATCGAGCTGCCGAGAAAGAGAGCTGGACCGTGAAGC 1426  
 Db 1456 CTGATTAATGACCACTACGCTATATAGTGTCTCCAGAAAAACAGCTGAGATGTCAATG 1515  
 QY 1427 ACATCCAGAGCTGTGGGCAAGTGAATCTGGGCGACAGATCTACCCCGGCAATCAAG 1486  
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 QY 1487 TGGCGCAGCTGTGCAAGCTGCTGCGCGGCGCAAGGCTTGAACCATCGTCCCTGGA 1546  
 Db 1576 TAAAGCAATATATGATAACTCCTTTAGAGGAACCAAGCACTTACAGAAATTAACCACTAA 1635  
 QY 1547 CCGAGAGGCGGAGTGGAGCTGGCGAGAACCGGAGATCTGCGCGAGCCCGTGCACG 1606  
 Db 1636 CAGAAAGAGAGAGCTAGAGCTGGCAAGAAACAGAGAGTTCTTAAAGAACCAATACATG 1695  
 QY 1607 GCGTGTACTACGACCCCAAGCAAGACCTGTGTGGCGAGATCCAGAGCAGGCGCACGAC 1666  
 Db 1696 GAGTGTATTAATACCACTAATAAAGACTTAATAGCAAAATACAGAAAGCAGGCGCAAGG 1755  
 QY 1667 AGTGAACCTTACAGATCTACCGAGGCTTCAAGAACTGAAAGCCGGAAGTACGCCA 1726  
 Db 1756 AATGACATATCAAAATTTATCAAGAGCCATTTAAATCTGAAAACAGGAAATATGCA 1815  
 QY 1727 AGATGCGACCGCGCACCAAGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1786  
 Db 1816 GATATAGGGGTGCCCACTATATGATTAACAATTAACAAGAGAGAGAGAGAGAGAGAG 1875  
 QY 1787 CCATGAGAGAGATCGTGTATCTTGGGCGAAGACCCCAAGTTCCGCTGCGCCATCCCAAGAG 1846  
 Db 1876 CCACAGAAAGCATAGTAATATGGGAAAGACTCTTAATTAATTAAGTCCCATACAAAGG 1935  
 QY 1847 AGACTGGGAGACTGTGTGAGACGACTACTGGCAGGCCACTTGGATCCCGAGTGGAGT 1906  
 Db 1936 AAACATGGGAAACATGTGTGAGACAGTATTTGCAAGCCACTGTGATTTCTGTAGTGGAGT 1995  
 QY 1907 TCGTGAACACCCCGCTGTGTGAGAGCTGTGTACAGAGCTGGAGAGAGAGAGAGAGAG 1966  
 Db 1996 TTGTTAATACCCCTCTTATGTAATTTATGTTACCAAGTTAGAGAAAGAACCCCATATGAG 2055

QY 1967 GCCCGAGACCTTTCTACGTGACGCGCGCCGCAACCGAGAACCAAGATCGGCAAGCGC 2026  
 Db 2056 GAGCAGAAACCTTTCTATGTAGATGSGCAGCTAACAGGAGACTAATTTAGAAAGACAG 2115  
 QY 2027 GCTACGTGACCGACCGGCGCGCGAGAGATCGTGAACCTTACCGAGACCAACCAAGAG 2086  
 Db 2116 GATATGTACTTAATAGAGAGAAAGCAAAAGTGTCACTTAAGTACGACAAACAATCAGA 2175  
 QY 2087 AGACCGAGCTGACAGCCATTCAGTGGCCCTTGCAGAGACAGGCGAGAGAGTGAACATCG 2146  
 Db 2176 AGACTGTGTTACAGCAATTTATCTTACCTTTGAGAGATTCGGGATTTAGAAATTAACAATG 2235  
 QY 2147 TGACCGACAGCCAGTACGCCCTGGGCACTCATCCAGCGCCAGCCGACAGACAGAGAGCG 2206  
 Db 2236 TAAAGACTGACATATGCAATTTAGATTCATTTCAAGACACACAGATCAAGTGAATAG 2295  
 QY 2207 AGCTGTGAACCAATCATGAGCAGCTGATCAAGAAAGAGAGAGTGTACTGAGCTGGG 2266  
 Db 2296 AGTTAGTCAATCAATATATAGAGCAGTTAATATAAAGAGAAAGGTCTATCTGGCATGG 2355  
 QY 2267 TGCCCGCGCAAGGCGATCGGCGCAACAGCAGATTCGAACTGTGACAGAGCA 2326  
 Db 2356 TACCAGCACAAAGAGATTGAGAGAAATGACAAATGATTAATTAATGTCAGTGTGAA 2415  
 QY 2327 TCCGCAAGTGTCTCTCTGAGCCGCAATCAT 2358  
 Db 2416 TCAGGAAGTACTATTTTATGATGGAATAGAT 2447

RESULT 8  
 US-09-117-217-9  
 ; Sequence 9, Application US/09117217  
 ; Patent No. 6221578  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERTOGS, Kurt  
 ; APPLICANT: PAWELIS, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/117,217  
 ; CURRENT FILING DATE: 1998-07-24  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 9  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (334)..(489)  
 ; OTHER INFORMATION: gsg P6 (52 AA)  
 US-09-117-217-9

Query Match 44.0%; Score 1081.6; DB 3; Length 2601;  
 Best Local Similarity 67.9%; Pred. No. 7.6e-169;  
 Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

QY 14 TGGCCGAGGCGCATGAGCCAGGCGCACCA--GCGCAACATCTGTATGAGCGGCAAGCACT 70  
 Db 77 TGGGTGAAGCAATGAGCCAGAGTAAATTCAGCTACATATGATGAGAGAGCAATTT 136  
 QY 71 TCAAGGGGCCCAAGCGCATCATCAGTGCCTTCAACTGCGGCAAGAGGCGCAATCGGCC 130  
 Db 137 TTAGAACCAAGAAAGATTTTAAAGTCTTCAATTTGTGGAAAGAGAGGCAACACAGCA 196  
 QY 131 GCAACTGCGCGCCCGCCGCAAGAGAGGCTCTGGAAGTGGCGCAAGAGGCGCAACAGCA 190  
 Db 197 GAATTTGAGAGGCGCCCTTAGAGAAAGAGGCTGTGTGAATGTGGAAGAGAGACACCAA 256  
 QY 191 TGAAGAGACTGACCGAGGCGCAGGCGCAACTTTCTTCCGCGAGAGACTGTGCTTCCCGCAGG 250

1336 GGCACATAGAACAAAAATAGAGGAGCTGAGACACATCTGTTGAGTGGGACTTACCA 1395  
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1396 CACCAGACAAAAACATCAGAAAGAACCTCCATCTCTTTGGATGGTATGAACCTCCATC 1455  
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1427 ACATCCAGAGCTGTGGCAAGCTGAATCGGCCAGCAGCATCTACCCCGCATCAAGG 1486  
1516 ACATACAGAGTTAGTGGGAAATTGAATGGGCAAGTCAGATTTACCCAGGATTAAG 1575  
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1667 AGTGACCTACAGATCTACAGAGAGCCCTTCAAGAACCTGAGACCCGCAAGTACGCA 1726  
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1936 AAACA TGGGAAACATSGTGGACAGATTTGGCAAGCCACCTGGATCTCTGAGTGGAGT 1995  
1907 TCGTCAACACCCCGCTCTGTTGAGCTGTGTACAGCTGAGAGAGAGCCCATCATCG 1966  
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2116 GATATGTTACTTAATAGAGAAAGACAAAAGTTGTCACTTAATGACACAAATTCAG 2175  
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2327 TCCGCAAGGTGCTGTTCTCTGGACGCGATCGAT 2358  
2416 TCAGGAAAGTACTATTTTTTAGATGGAATAGAT 2447

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316 GGAAGCCAGGGAATTTTCTTTCAGAGCAGACACAGAGCCCAACAGCCCAACAGAGAGC 375  
311 TCGAGTGGCGG-----CGACACCCCGCAGCGAGGCGCGCGCGCGCGCGCGCA 364  
376 TTCAGTCTGGGGTAGAGACAACTCCCTCTCAGAGCAGAGCGGATAGACAGGAA 435  
365 -----CCCTGAACCTTCCCGCAGATCACCTGTGGAGCGCCCTCTGTGAGCATCAAGG 418  
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556 AATGAGTTTGCAGGAAGATGGAACCAAAATGATAGGGGAATTTGAGGTTTTATCA 615  
539 AGGTGCGCCAGTACGACCTCTGATCGAGATCTGCGGCAAGAGGCGCATCGGCACCG 598  
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599 TCGTGTGCGCCGACCCCGGTGAACATCATCGCGCCGAACTGTGACCCAGCTGGGCT 658  
676 TATTAGTAGACCTACACCTGTCAACATAATTTGGAAGAAATCTGTTGACTCAGATTGGTT 735  
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736 GCACCTTAAATTTCCCATAGCCCTATTGAGACTGTACAGTAAATTAAGCCAGGAA 795  
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839 ACAACACCCCGTGTGCGCATCAAGAGAGAGCAGCAGCTGCGCGCAGAGCTGGTGG 898  
916 ACAATCTCCAGTATTGCGCATTAAGAAAGAGCAGTACTAAATGGAGAAATTAGTAG 975  
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1019 TCAGCGTCCCTGGAGAGGACTTCCGAGTACACCGCTTCAACATCCCGCATCA 1078  
1096 TTTTCAGTCCCTTAGATGAGACTTCAGGAAGTATCTGCAATTTACCATCTAGTATAA 1155  
1079 ACAACGAGACCCCGGCTCCGCTACAGTACAACTGTGTCGCCCGAGGCGTGAAGGGA 1138  
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1216 CACCAAGATATTTCCAAAGTAGCATCAAAAAATCTTAGAGCCCTTTAGAAAAACAAATC 1275  
1199 CGAGATCTGATCTACCA-----GGCCCCCTGTAGCTGGCAGGACCTGGAGATCG 1252  
1276 CAGACATAGTTATCTATCAATACATGGATGATTTGTATGTAGGATCTGACTTAGAATAG 1335  
1253 GCAGACCGCGCAAGATCGAGGAGCTGCGCAAGCACCTGCTGCGCTGGGCTTCACCA 1312

## RESULT 9

US-09-117-217-11

; Sequence 11, Application US/09117217

; Patent No. 6221578

; GENERAL INFORMATION:

; APPLICANT: de BETHUNE, Marie-Pierre

; APPLICANT: HERROGS, Kurt

; APPLICANT: PAUMELS, Rudi

; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE

; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY

; FILE REFERENCE: 1377-125P

; CURRENT APPLICATION NUMBER: US/09/117,217

; CURRENT FILING DATE: 1998-07-24

; NUMBER OF SEQ ID NOS: 15

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 11

; LENGTH: 2601

; TYPE: DNA

; ORGANISM: HIV-HXB2

; FEATURE:

; NAME/KEY: CDS

; LOCATION: (453)..(749)

; OTHER INFORMATION: Protease

US-09-117-217-11

Query Match

Best Local Similarity 44.0%; Score 1081.6; DB 3; Length 2601;

Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

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 QY 71 TCAGAGGCCCAAGGCAATCATCAAGTCTCACTGCGGCAAGAGGCGCAATGCGCC 130  
 Db 137 TTAGAACCAAGAGAGATTGTTAGTTCATATTGCGCAAGAGGCGCACAGGCA 196  
 QY 131 GCAATGCGCGCGCGCGCGCAGAGAGGCTGTGAAGTGCAGGCAAGAGGCGCCACCA 190  
 Db 197 GAAATGCAAGGCGCCCTAGAGAAAGAGGCTGTGAAGATGTGAAGAGAGACACAAA 256  
 QY 191 TGAAGACTGCAACCGAGCGCCAGGCCAACTTCTCCGAGAGACCTGCGCTTCCGCCAG 250  
 Db 257 TGAAGATTGTAAGTAGAGACAGGCTAA-TTTTAAAGGAATGTGGCTTCTACAG 315  
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 QY 599 TGCTGATGCGGCCCAACCCCGTGAACATCATCTGCGCGGCAACATGCTGACCCAGCTGGGCT 658

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 Db 1276 CAGCATATGTTATCTATCATACATGATGATTTGATGATGATCTGACTTAAATATG 1335  
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 Db 1576 TAAAGCAATTATGTAACTCTTGTAGAGAGACAAAGACATTAAGAGATTAACCATCA 1635  
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 Db 1636 CAGAGAGAGCAGAGCTGAGATGCGCAGAGAGAGAGAGAGATCTTAAGAGAGAGAGAG 1695  
 QY 1607 GCGTGTACTAGACCCAGAGAGAGCTGTGTGCGAGATCCAGAGAGAGGCGCAAGCC 1666  
 Db 1696 GAGTGTATTATGAGCCATCAAGAGACTTAATAGAGAGAGATCAAGAGAGAGGCGCAAGCC 1755  
 QY 1667 AGTGGACTTACAGATCTTACAGAGAGCGCTTCAAGAGAGCTGAGAGAGCGGCAAGTACCGCA 1726



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1727 AGATGCGACCGCCACCAACAGAGCTGAGAGAGCTGACCGAGCGCGTGCACAGATCG 1786  
1816 GAATGAGGGTGCCACACTAATGATGTAACAAATTAACAGAGGAGTGCACAAAAATAA 1875  
1787 CCATGGAGAGCATCGTGTATCTGGGGCAAGACCCCAAGTTTCCGCTGCCCATCCAGAAGG 1846  
1876 CCACAGAAAGCATAGTAATATGGGAAGAGCTCTTAATTTAACTGCCCATACAAAGG 1935  
1847 AGACCTGGAGAGCTGGTGGACCGACTACTGGCAGGCGACCTGGATCCCGAGTGGGAGT 1906  
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1907 TCGTGAACACCCCGCCCTCGTGAAGCTGTGTACAGCTGGAGAGAGGAGCCCATCATCG 1966  
1996 TTGTTTAATACCCCTCCCTTAGTGAATATTGTTACCGATTAGAGAAAGAACCCATAGTAG 2055  
1967 GCGCCGAGACCTTCTACGTGGACGGCGCCGCCAACCCGCGAGACCAAGATCGGCAAGGCCG 2026  
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2027 GCTACGTGACCGACCGGGCGGCGAGAGATCTGAGCTGACCGAGACCAACCAACAGAG 2086  
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2207 AGCTGTGACACAGATCATCAGCAGCTGATCAAGAGAGAGAGTGTACCTGAGCTGGG 2266  
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2416 TCAGGAAGTACTATTTTATAGATGAATAGAT 2447

## RESULT 10

US-09-117-217-13  
; Sequence 13, Application US/09117217  
; Patent No. 6221578  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kurt  
; APPLICANT: PAUWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; TITLE OF INVENTION: OF HUMAN HIV STRAINS  
; FILE REFERENCE: 1377-125P  
; CURRENT APPLICATION NUMBER: US/09/117,217  
; CURRENT FILING DATE: 1998-07-24  
; NUMBER OF SEQ ID NOS: 15  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 13  
; LENGTH: 2601  
; TYPE: DNA  
; ORGANISM: HIV-HXB2  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (750)...(2435)  
; OTHER INFORMATION: Reverse Transcriptase

US-09-117-217-13

Query Match 44.0%; Score 1081.6; DB 3; Length 2601;  
Best Local Similarity 67.9%; Pred. No. 7,6e-169;  
Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;  
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Qy      1199 CCGAATGTGTATCTCA-----GGCCCCCTGTAGCTGGGACGCACTGAGATCG 1252
Db      1276 CAGACATGTATCTATCATATCATGATGATTTGTATGTAGATCTGACTTGAAGATAG 1335
Qy      1253 GCGAGCACCGGCGCAGATCCAGAGCTGCGCAACACCTGTGTGGCTGGGGCTTCACCA 1312
Db      1336 GCGACATAGAAACAAAATAGAGAGCTGAGACACATCTGTTAGGTGGGACTTACCA 1395
Qy      1313 CCCCCGACAGAGACACAGAGAGAGCCCCCTCTCTGCCCCAT-----CGAGCTGACC 1366
Db      1396 CACGACACAAAAAATCATGAGAAAGAACCTCCATCTCTTGGATGGGTTATGAACTCCATC 1455
Qy      1367 CCGACATGTGACCTGTGACCCCATCGAGCTGCCGAGAGAGAGCTGAGACCTGAAACG 1426
Db      1456 CTGATTAATGACAGTACAGCCTTATAGTGTCCGAGAAAAGACAGCTGAGCTGCAATG 1515
Qy      1427 ACATCCAGAGCTGTGGGCAAGCTGAACTGGGGCAGCAGATCTACCCCGGCATCAAG 1486
Db      1516 ACATCCAGAGTATAGTGGGAAATGATGTGGCAAGTCAAGTTTACCAGGATTAAG 1575
Qy      1487 TGCCGCACTGTGCAAGCTGTGCGCGGCGCCAGAGCCCTGACCCGATCTGCCCCGTA 1546
Db      1576 TAAGCAATATATGTAACTCTCTTAGAGAGAACCAAGACTATACAGAAATATACACTAA 1635
Qy      1547 CCGAGAGAGCGAGCTGAGCTGGCGCGAGAACCGGAGATCCTGCGCGAGCCGCTGACG 1606
Db      1636 CAGAGAGAGAGAGTGAACCTGAGCAAGAAACAGAGAAATCTTAAAGAACAGATACATG 1695
Qy      1607 GCGTGTACTACGACCCCGCAGAGAGCTGTGTGGCGAGATCCAGAGAGAGGCGCCAGACC 1666
Db      1696 GAGTGTATTAAGACCCATCAAAAAGCTTATATGCGAAATACAGAGAGAGGCGCAAGGCC 1755
Qy      1667 AGTGAAGCTTACAGATCTTACAGAGAGCCCTTCAAGACCTGAAAGACCGGCAAGTACGCA 1726
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Qy      1787 CCATGAGAGAGATCTGTATCTGGGGCAGAGACCCCAAGTCCGCTGTGCCATCCAGAGAG 1846
Db      1876 CCACAGAGAGATGTATATATGGGGAAGAGCTCCATTAATTTAAATGCGCCATACAAAG 1935
Qy      1847 AGACCTGGGAGACTGTGTGACCGACTATCTGGAGGCACTGTGATCCCGAGTGGAGT 1906
Db      1936 AAACATGGGAAACATGTGTGACAGAGTATTTGCAAGGCACTGTGATCTCTGAGTGGAGT 1995
Qy      1907 TCGGAGACACCCCCCTGTGTGAAGCTGTGTATCCACTGAGAGAGAGAGCCCTCATCG 1966
Db      1996 TTGTTAATATCCCTCTTGAATATATGTGTATCAATTTAGAGAAAGAACCCATAGTAG 2055
Qy      1967 GCGCGAGAGACCTTCTACGTGAGCGCGCGCAACCGGAGACCAAGATCGGCAAGGCG 2026
Db      2056 GAGCAGAAACCTTCTATGTATAGTGGGAGAGCTATACAGGAGACCTTAATTTAGAGAAAGTAG 2115
Qy      2027 GCTACGTGACCGAGCCGGGGCGGAGAAATCTGTAGGCTTACCGAGACCAACCAACGA 2086
Db      2116 GATATGTATTAATAAGAGAGACAAAAGTTGTACCTTAATCTGACACACAAATCGA 2175
Qy      2087 AGACCGAGCTGCGAGGCAATCCAGCTGCGCTGCGAGGAGAGGCGAGCGAGTGAACATCG 2146

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Db      2176 AGACTGATTCAAGCAATTTATCTAGCTTTGACAGATTCGGGATTAAGATTAACATAG 2235
Qy      2147 TGACCGACAGCACTAGAGCCCTGGGCAATTCAGGCCCCGAGCAAGGCGAGAGCG 2206
Db      2236 TAAAGACTCAAAATATGATAGTAAATCATTCAGAGCAACAGATCAAGTAAATCG 2295
Qy      2207 AGCTGTGAACCAATATCATGAGAGCTGATCAAGAGAGAGAGTGTACTGAGCTGAG 2266
Db      2296 AGTATGCAATCAATATATAGAGAGTATTAATAAAGAGAAAGGTCTATCTGGCATG 2355
Qy      2267 TGCCCGCCACAGAGGAGATGCGGCAACGAGAGATGACAGACTGTGTGACAGAGCA 2326
Db      2356 TACAGACACAAAGAAATGAGAGAAATGAAACAAGTATGATTAATGATGATGCTGAA 2415
Qy      2327 TCCCGAGGTGCTGCTCTCTGAGCGCATCGAT 2358
Db      2416 TCAGAAAGTACTATTTTATGATGAAATAGT 2447

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RESULT 11
US-09-735-487-7
; Sequence 7, Application US/09735487
; Patent No. 6528251
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Kurt
; APPLICANT: FAUMELS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; TITLE OF INVENTION: OF HUMAN HIV STRAINS
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/735,487
; CURRENT FILING DATE: 2000-12-14
; PRIOR APPLICATION NUMBER: 09/117,217
; PRIOR FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(492)
; OTHER INFORMATION: gag Polyprotein
US-09-735-487-7

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Query Match      44.0%; Score 1081.6; DB 4; Length 2601;
Best Local Similarity 67.9%; Pred. No. 7.6e-169;
Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

Qy      14 TGCGCGAGGCGCATAGGCGAGGCAACCA---GCGCAACATCTGATGCAAGCGCAACT 70
Db      77 TGCGTGAAGCAATGAGCGAAGTAAATTCAGTATCAATTAATGATGCAAGAGCGCAATT 136
Qy      71 TCAAGGCGCCCAAGCGCATCATCAATGCTTCAACTGCGGCAAGAGAGGCGCACTGCCCC 130
Db      137 TTGAGAACCAAGAAATATTGTTAAGTGTTCATTTGTGCAAGAGAGGCGCACAGCCA 196
Qy      131 GCAACTCGCGGCCCGCCGDAAGAGGCTGTGGAAGTGTGCGGCAAGAGAGGCGCAACAGA 190
Db      197 GAATTTCAAGGCGCCCTTAGGAGAAAGAGGCTGTGGAATGTGGAAGAGAGACACCAAA 256
Qy      191 TGAAGAGTGCACCGAGCGCGCAGGCAACTTCTCGCGAGAGACTGTGGCTTCCCGCAGG 250
Db      257 TGAAGATTTGTACTGAGAGAGAGAGCTTA-TTTTATGAGGAAGATCTGGCTTCTTACAG 315
Qy      251 GCAAGCGCCGAGATTCCCGAGCGAGAGACCGCGCAACAGCCCAAGCGCGCAGC 310
Db      316 GGAAGGCGAAGGATTTTCTTCAGAGAGAGACAGAGCAACAGCCCAAGAGAGAGC 375
Qy      311 TGCAAGTGTGCGG---CGACACCCCGCAGCGAGAGGCGGCGCGGCGAGCGCA 364

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Db 376 TTCAGGTCTGGGTAGAGACAACAACCTCCCCCTCAGAACGAGCGGATAGACAAGGAA 435  
Qy 365 -----CCCTGAACTTCCCCAGATCACCCTGTGGCAGCGCCCTCTGGTGAAGCATCAAG 418  
Db 436 CTGTATCTTTAACTTCCCTCAGTCACTCTTTGGCAACGACCCCTCGTCACAATAAAGA 495  
Qy 419 TGGCGGCCAGATCAAGGAGGCCCTGTGTGACACCGCGCGCGAGCACACCGTCTGGAGG 478  
Db 496 TAGGGGGCAACTAAAGGAGCTCTATTAGATACAGGACGAGATGATACAGTATTAGAAG 555  
Qy 479 AGATGAGCCTGCCCGGCAAGTGAAGCCCAAGATGATGCGCGGCATCGCGGCTTCATCA 538  
Db 556 AARTGAGTTTGCAGGAAGATGTAACCAAAATGATAGGGGAATTTGAGGTTTATCA 615  
Qy 539 AGGTGCGCCAGTACGACCATCTGTGAGATCTGCGCAGAGGCGCATCGGCAACG 598  
Db 616 AAGTAGACAGTATGATCAGATCTCATGAAATCTGTGACATAAAGCTATAGGTACAG 675  
Qy 599 TGCTGATCGGCCCCACCCCGTGAACATCATCGCGCGCAACATGCTGACCCAGCTGGCT 658  
Db 676 TATTAGTAGGACCTACACCTGTCAACATAATTGGAAGAAATCTGTTGACTCAGATTGGTT 735  
Qy 659 GCACCTGAACTTCCCATCAGCCCATCGAACCTGAGACCTGCGCGGAACTGAAGCCCGGA 718  
Db 736 GCACCTTAAATTTCCCATTTAGCCCTATTGAGACTGTACCACTGTAATAAATTAAGCCAGGAA 795  
Qy 719 TGAACGCGCCCAAGGTGAAGCTGCGCCCTGACCGAGGAGAGATCAAGGCGCTGACCG 778  
Db 796 TGTATGCGCCCAAGTTAACTAAGTGGCCATTGACAGAAAGAAATAAAGCATTTAGTAG 855  
Qy 779 CCATCTGCGAGGAGATGGAAGAGGGAAGATCACCAAGATCGGCCCGCGAGAACCCCT 838  
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Qy 839 ACAACACCCCGTGTTCGCATCAAGAGAGAGACACCAAGTGGCGCAAGCTGGTG 898  
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Qy 899 ACTTCGCGAGTGAACAGCGCACCCAGGACTTCTGGAGGTGACGCTGGGCATCCCC 958  
Db 976 ATTTCAGAACTTAATAAGAGAACTCAAGACTTCTGGGAAGTTCAAATTAGGAATACCAC 1035  
Qy 959 ACCCGCGCGCTGAAGAGAGAGAGGTGACCGTGTGACGTGGCGACGCGCTACT 1018  
Db 1036 ATCCGCGAGCTTAAAGAGAAATCAGTACACTGATGATGATGATGATGATGATGATGAT 1095  
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Db 1096 TTTCACTTCCCTTAGATGAAGACTTCAGGAAGTATATCTGCAITTTACCATACCTAGTATA 1155  
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Qy 1139 GCGCCAGCATTTCCAGAGCAGATCAACCAAGATCCTGGAGCCCTTCGCGCGCGCAAC 1198  
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Qy 1367 CCGCAAGTGGACCGTGCAGCCCATCAGCTGCGCGAGAGGAGAGCTGGAACGTAAGC 1426  
Db 1456 CTGATAAATGGACAGTACAGCCCTATAGTGTGCGCAGAAAAAGACAGCTGACTGTCAATG 1515

Qy 1427 ACATCCAGAGCTGTGGCAAGCTGAACCTGGGCGCAGCCAGATCTACCCCGGCGATCAAG 1486  
Db 1516 ACATACAGAGTGTAGTGGGAAATTTGAATTTGGCAAGTCAGATTTACCCAGGATTAAG 1575  
Qy 1487 TCGCGCAGCTGTGCAAGCTGTGCGCGCGCAAGCCCTGACCCGACATCTGTGCCCTGA 1546  
Db 1576 TAAGGCATTTATGTAATCTCTTTAGAGAACCAAGACACTAACAGAGTAATACCACTAA 1635  
Qy 1547 CCGAGAGCCGAGCTGGAGCTGGCCGAGAACCGCGAGATCTCTGCGGAGCCGCTGACG 1606  
Db 1636 CAGAAGAGCAGAGCTAGAACTGGCAGAAAAACAGAGAGATTCTAAAAGAACCACTACATG 1695  
Qy 1607 GCGTCTACTACAGCCCGCAGCAGGACCTGGTGGCGGAGATCCAGAGCAGGCGCAGAC 1666  
Db 1696 GAGTGTATTTATACCCCATCAAAAGACTTAATAGCAAAATAACAGAGCAGGCGCAAGGCC 1755  
Qy 1667 AGTGACCTTACCAGATCTACAGGAGCCCTTCAAGAACTGGAAGACCGCAAGTACGCCA 1726  
Db 1756 AATGACATATCAATTTATCAAGAGCCATTTAAANAATCTGAAACAGAGAAATATGCAA 1815  
Qy 1727 AGATGCGCACCCCGCACCAACGACGTAAGACGCTGACCGAGCCGTGCGAGAGATCG 1786  
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Db 1936 AAACATGGGAAACATGGTGGACAGATATTGCAAGCCACCTTGGATTCTTGTAGTGGAGT 1995  
Qy 1907 TCGTGAACACCCCGCTCTGTGTAAGCTGTGTACAGCTGGAAGAGGACCATCATCG 1966  
Db 1996 TTGTTAATAACCCCTCTCTAGTGAATATGTTACAGTTAGAGAAAGAACCCATAGTAG 2055  
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Db 2056 GAGCAGAAACCTTCTATGTAGTGGGCGAGCTAACAGGAGACTAAATTTAGGAAAAAGCAG 2115  
Qy 2027 GCTAGTGACCCAGCGCGCGCGCAGAGATGCTGAGCTGACCGAGACCCACCAACAG 2086  
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Qy 2087 AGACCGAGCTGACGCGCATTCAGCTGGCCCTGACGAGACGCGGACGAGGTGAACATCG 2146  
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Qy 2207 AGCTGGTGAACAGATCATCGAGCAGCTGATCAAGAGAGAGGTGTACTGAGCTGGG 2266  
Db 2296 AGTTAGTCAATCAATATAGAGAGTTAATAAAGAGAAAGTCTATCTTGGCATGGG 2355  
Qy 2267 TGCCCGCCCAAGGCGCATTCGCGCAACAGCAGATCGACAGCTGTGTGACAAAGGCA 2326  
Db 2356 TACCAGCACAAAGGAATTTGAGGAATGAACAAGTAGATAAATTAGTCACTGTGTGAA 2415  
Qy 2327 TCCGCAAGGTGCTTCTTGGACGCGCATCGAT 2358  
Db 2416 TCAGAAAAGTACTATTTTTAGATGAATAGAT 2447

RESULT 12  
US-09-735-487-9  
; Sequence 9, Application US/09735487  
; Patent No. 6528251  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kurt

/ APPLICANT: PAUMELS, Rudi  
 / TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 / TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 / TITLE OF INVENTION: OF HUMAN HIV STRAINS  
 / FILE REFERENCE: 1377-125P  
 / CURRENT APPLICATION NUMBER: US/09/735,487  
 / CURRENT FILING DATE: 2000-12-14  
 / PRIOR APPLICATION NUMBER: 09/117,217  
 / PRIOR FILING DATE: 1998-07-24  
 / NUMBER OF SEQ ID NOS: 15  
 / SOFTWARE: Patent In Ver. 2.0  
 / SEQ ID NO: 9  
 / LENGTH: 2601  
 / TYPE: DNA  
 / ORGANISM: HIV-HXB2  
 / FEATURE:  
 / NAME/KEY: CDS  
 / LOCATION: (334)..(489)  
 / OTHER INFORMATION: gag P6 (52 AA)  
 US-09-735-487-9

Query Match 44.0%; Score 1081.6; DB 4; Length 2601;  
 Best Local Similarity 67.9%; Pred. No. 7.6e-169;  
 Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

QY 14 TGGCCGAGGCGCATGAGCCAGCCACCA--GGCCACATCCTGATGACGCGCAACT 70  
 Db 77 TGGCTGAAGCATGAGCCAGTAACAATTCAGCTACATATGATGACGAGGCAATT 136  
 QY 71 TCAAGGGCCCCAGGCGCATCATCAAGTCTTCACTGCGGCAAGAGGCGCCATGCCC 130  
 Db 137 TTAGAACCCAAAGAAAGATTGTAAGTGTTCATTTGTGCAAGAGAGGGGCAACAGCA 196  
 QY 131 GCACTGCGCGCGCCCCCGCAAGAGGCGTGTGGAAGTGGCGCAAGAGGGCGACCA 190  
 Db 197 GAATTTGCAAGGCGCCCTTAGAAGAAAGGCTGTGGAAATGTGAAAGAGAGACACAAA 256  
 QY 191 TGAAGACTGACCGAGCGCCAGGCGCACTTCTCCGCGAGAGACCTGCGCTTCCCCAG 250  
 Db 257 TGAAGATTGTACTGAGAGACAGGCTAA-TTTTAAAGGAAAGATCTGCGCTTCTTAAG 315  
 QY 251 GGAAGCGCCGCGAGTTCCCCAGGAGAGAAACCGCGCCCAACAGCCCGACCGAGC 310  
 Db 316 GGAAGCGCAAGGAAATTTTCTTCAAGAGCAGACCAAGGCCAACCCCAACAGAGAGC 375  
 QY 311 TGCAGGTGCGCGG-----CGACAAACCCCGCAGCGAGCGCGCGCGCGCGCGCGCA 364  
 Db 376 TTCAAGTCTGGGCTAGAGCAACAACCTCCCCCTCAGAGACAGAGCCGATAGACAGAA 435  
 QY 365 -----CCTGAACCTTCCCCAGATCACCTGTGGCAGCGCCCTGTGAGCATCAAG 418  
 Db 436 CTGTATCCTTTAACTTCCCTCAGGTCACTTTGGCAAGACCCCTCGTCAATTAAGA 495  
 QY 419 TGGGGGCGCAGATCAAGAGAGGCGCTGTGAGAACCGGCGCCGACAGACACCGTGTGAG 478  
 Db 486 TAGGGGGGCACTAAAGGAAGCTCTATTAGATACAGAGCAGATGATTAAGATTAGAG 555  
 QY 479 AGATAGGCTGCGCGCAAGTGAAGCCCAAGATATCGCGGCAATCGCGGCTTCATCA 538  
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QY 719 TGAAGGCCCCCAAGGTGAGAGAGTGGCCCTGACCGAGAGAGATCAAGGCGCTGACCG 778  
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 QY 1079 ACAAGAGACCCCGCGCATCCGCTACAGTACAGTACAGTACAGTCCCGCGGCGAGAGCA 1138  
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 QY 1367 CCGACAAGTGAACCGTGAAGCCATGAGCTGCGCGCAAGAGAGAGTGAACCGTGAACG 1426  
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 Db 1516 ACATACAGAAAGTATAGTGGGAAATTTGAATTTGGCAAGTCAATTTACAGAGGATTAAG 1575  
 QY 1487 TGCCTCAGCTGTGAAGTGTGTGGCGCGCGCAAGGCGCTTACCGCATCTGTGCCCTGA 1546  
 Db 1576 TAAAGCATTTATGTAACCTCTTAGAGAGAACAAAGACATTAACAGAAATTAACCATPA 1635  
 QY 1547 CCGAGAGGCGGAGCTGAGCTGGCGCAAGAACCCGAGATCTGTGCGCAGCCCGTGAACG 1606  
 Db 1636 CAGAAAGAGCAGAGCTGAGAACTGCGCAAGAAACAGAGATTTCTAAAGAACAGTACATG 1695  
 QY 1607 GCGTGTACTGACCCCCAGCAAGGACTCTGTGGCGGATCTCAAGAGAGGCGCAAGACC 1666  
 Db 1686 GAGGTATTTATAGACCCCATCAAAAGACTTAATAGAGAAATCAAGAGAGGCGCAAGGCC 1755  
 QY 1667 AGTGAACCTACAGATCTACAGAGAGCGCTTCAAGAACCTGAAGACCGGCAAGTACGCA 1726  
 Db 1756 AATGSAATATCAATTTATTAAGAGCCATTTAAATCTGAAACAGAGAAATATGCA 1815  
 QY 1727 AGATGCGACCGCCCAACCAAGACGTGAAGCAGCTGACCGAGAGCGCTGAGAGAGATCG 1786  
 Db 1816 GAATGAGAGGCGGCGCAGACATATGATTAAGCAATTAACGAGAGCGAGTGAAGAAATTA 1875  
 QY 1787 CCAATGAGAGCATGTGATCTGGGCGCAAGCCCGCAAGTTCCGCTGCGCATCAAGAG 1846

Db 1876 CCAGAAAGCATAGTAATATGGGAAAGACTCTCTAAATTTAAACTGCCCATACAAAGG 1935  
QY 1847 AGACCTGGAGACCTGCTGGACCGACTACTGGGAGGCGACCTGGATCCCGAGTGGAGT 1906  
Db 1936 AAACATGGGAAACATGTGGACAGATTTGGCAAGCCACCTGGATTCTCTGAGTGGAGT 1995  
QY 1907 TCGTGAACACCCCCCTCTGGTGAAGCTGTGTACAGCTGGAGAGGAGCCCATCATCG 1966  
Db 1996 TTGTTAATACCCCTCCCTTAGTGAATATGTTACCACTTAGAGAAAGAACCCATAGTAG 2055  
QY 1967 GCCTGGAGACCTTCTAGCTGGAAGGCGCCGCAACCGCGAGACCAAGATCGGCAAGCCCG 2026  
Db 2056 GAGCAGAAACCTTCTATGTAGATGGGACGCTAACAGGGAGACTAAATTAGGAAAGCAG 2115  
QY 2027 GCTACGTGACCGACCGGGCGGCGAGAGATCTGTAGCCTGACCGAGCCGAGCAACCAAG 2086  
Db 2116 GATATGTTACTAATAGAGAGAACAAAGTGTTCACCCCTAACCTGACACAAACATCAGA 2175  
QY 2087 AGACCGAGCTGCGAGGCAATCCAGCTGGCCCTGAGGACAGCGGCGAGGAGTGAACATCG 2146  
Db 2176 AGACTGAGTTACAGCAATTTATCTAGCTTTGAGGATTCGGGATTAGAAGTAAACATAG 2235  
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Db 2236 TAACAGACTCACATATGCAATTAGGAATCAATCAAGCACAACAGATCAAGTGAATCAG 2295  
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Db 2356 TACCAGCACACAAGGAATGGAGGAATGAACAAGTAGATAAATTAGTCAGTGTCTGGAA 2415  
QY 2327 TCGCAAGTGTCTCTCGACGGCATCGAT 2358  
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## RESULT 13

US-09-735-487-11  
; Sequence 11, Application US/09735487  
; Patent No. 6528251  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kurt  
; APPLICANT: PAUWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; FILE REFERENCE: 1377-125P  
; CURRENT APPLICATION NUMBER: US/09/735,487  
; PRIOR FILING DATE: 2000-12-14  
; PRIOR APPLICATION NUMBER: 09/117,217  
; PRIOR FILING DATE: 1998-07-24  
; NUMBER OF SEQ ID NOS: 15  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 11  
; LENGTH: 2601  
; TYPE: DNA  
; ORGANISM: HIV-HXB2  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (453)...(749)  
; OTHER INFORMATION: Protease  
US-09-735-487-11

Query Match 44.0%; Score 1081.6; DB 4; Length 2601;  
Best Local Similarity 67.9%; Pred. No. 7.6e-169;  
Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

QY 14 TGGCGAGGCCATGAGCCAGGCCACA---GGCGCAACATCCTGTGCGAGCGCAACT 70

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QY 251 GCAAGCCCGGAGTTCCTCCAGGAGCAGAAACGCGCCCAACAGCCCCACAGCGCGGAGC 310  
Db 316 GGAAGGCCAGGGAATTTTCTTCAGAGCAGACACAGGCCCAACAGCCCCACAGAGAGAGC 375  
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QY 899 ACTTCGCGAGCTGAACAAAGCGCACCCAGGACTTCTGGGAGGTGAGCTGGGCATCCCC 958  
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QY 959 ACCCGCGCGCTGAAGAGAGAGACGCTGACGCTGCGAGTGGCGGCGAGCGCTACT 1018  
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Db 1156 ACAATGAGACACAGGAGTTAGATATCACTACATATGCTTCCACAGGAGTGAAGAT 1215  
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 QY 1787 CCATGAGAGAGCATCGTGTCTGGGGCAGAGCCCCCAATTCGCTGCCATCCAGAGG 1846  
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 QY 1907 TCGTGAACACCCCCCTGTGTGAAGCTGTGTACAGCTGAGAGAGAGCCATCATCG 1966  
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 ; Sequence 13, Application US/09735487  
 ; Patent No. 6528251  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERZOGS, Rudi  
 ; APPLICANT: FARMES, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/735,487  
 ; PRIOR FILING DATE: 2000-12-14  
 ; PRIOR APPLICATION NUMBER: 09/117,217  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: Patentin Ver. 2.0  
 ; SEQ ID NO 13  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-1HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (750)..(2435)  
 ; OTHER INFORMATION: Reverse Transcriptase  
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 Best Local Similarity 67.9%; Pred. No. 7.6e-169;  
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QY 479 AGATGAGCCTGCGCGGCAAGTGAAGCCCAAGATGATCGCGCGCATCGCGCGCTTCATCA 538  
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QY 1727 AGATGGCACCGCCCAACACAGCAGTGAAGCAGTGAACCGAGCGCTGCGAAGATCG 1786  
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Db 1996 TTGTTAATACCCCTCCCTTAGTGAATTTATGTTACAGTTAGAGAAAGAACCCATAGTAG 2055  
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## RESULT 15

US-09-552-950-1  
; Sequence 1, Application US/09552950  
; Patent No. 6541248  
; GENERAL INFORMATION:  
; APPLICANT: Oxford Biomedica (UK) Limited  
; TITLE OF INVENTION: Anti-Viral Vectors  
; FILE REFERENCE: 674524-2004  
; CURRENT APPLICATION NUMBER: US/09/552,950  
; CURRENT FILING DATE: 2000-04-20  
; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: PatentIn Ver. 2.1



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; SEQ ID NO 1
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; LENGTH: 4307
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus
US-09-552-950-1

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Query Match	44.0%;	Score 108.6;	DB 4;	Length 4307;
Best Local Similarity	67.9%;	Pred. No. 7.9e-169;		
Matches 1610; Conservative	0;	Mismatches 734;	Indels 28;	Gaps 6;

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Db	1327	GGAAAGCCAGGGAATTTTCTTCAGAGCAGACCGAGCCACAGCCCAACGAAGAGAC	1386
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QY	479	AGATGAGCCTGCCCCGCAAGTGAAGCCCAAGATGATGCGCGCATCGCGGCTTCATCA	538
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QY	599	TGCTGATGGGCCCCCAGCCCGTGAAATCATTCGCGCGCAACATGTCGCCAGTGGGCT	658
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Db	1747	GCACCTTAAATTTTCCCATTAGCCCTTATTGAGACTGTATCAGTAAATTAAGCAAGAA	1806
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Db	1927	ACAAATCTCCAGTATTGGCCATTAAGAAAAAAGACAGTAACTAAATGAGAAATTAATAG	1986
QY	899	ACTTCCGAGACTAAACAAGCGCACCCAGGACTTCTTGAGAGGTGACGTGGCATTCGCC	958
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QY	1667	AGTGAACCTTACCAATCTTACCGAGAGGCCCTTCAAGAACTTGAAGACCGGCAATACGCA	1726
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QY	1727	AGATGCGACCGCCACACCAACACACGCTGGAAGCAGCTGACCGAGGCGGTGCAGAAATCG	1786
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Db	3007	TTGTATATCCCTCTTGTGTAAATTAATGTATCCAGTTTAGAGAAAGAAACCATAGTAG	3066
QY	1967	GCGCGAGACCTTCTACGTGGAACGGCGCGCAACCGCGAGACCAAGATCGGCAAGGCGG	2026
Db	3067	GAGAGAAACCTTCTATGTATGGGGCAGCTAACAGGGAGACTTAATTTAGAAAAGCAAG	3126



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OM nucleic - nucleic search, using sw model

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14669.518 Million cell updates/sec

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Perfect score: 2457

Sequence: 1 gtcgacgcaccatggcgga.....gggctagcaccgtgaattc 2457

Scoring table: IDENTITY NUC

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Searched: 1731049 segs, 1297405648 residues

Total number of hits satisfying chosen parameters: 3462098

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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- 9: /cgn2\_6/ptodata/2/pubpna/US09A\_PUBCOMB.seq:\*
- 10: /cgn2\_6/ptodata/2/pubpna/US09B\_PUBCOMB.seq:\*
- 11: /cgn2\_6/ptodata/2/pubpna/US09C\_PUBCOMB.seq:\*
- 12: /cgn2\_6/ptodata/2/pubpna/US09\_NEW\_PUB.seq:\*
- 13: /cgn2\_6/ptodata/2/pubpna/US10A\_PUBCOMB.seq:\*
- 14: /cgn2\_6/ptodata/2/pubpna/US10B\_PUBCOMB.seq:\*
- 15: /cgn2\_6/ptodata/2/pubpna/US10\_NEW\_PUB.seq:\*
- 16: /cgn2\_6/ptodata/2/pubpna/US60\_NEW\_PUB.seq:\*
- 17: /cgn2\_6/ptodata/2/pubpna/US60\_PUBCOMB.seq:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2443.4	99.4	2445	12	US-10-190-435-43
2	2436.4	99.2	3930	12	US-10-190-435-9
3	2434.8	99.1	3930	12	US-10-190-435-10
4	2434.8	99.1	3930	12	US-10-190-435-11
5	2434.8	99.1	5184	12	US-10-190-435-58
6	2428.6	98.8	2457	12	US-10-190-435-44
7	2404.4	97.9	3531	12	US-10-190-435-13
8	2403.4	97.8	2457	12	US-10-190-435-45
9	2402.8	97.8	3537	12	US-10-190-435-14
10	2402.8	97.8	3537	12	US-10-190-435-15
11	2401.8	97.8	5145	12	US-10-190-435-12
12	2343.4	95.4	3607	12	US-10-190-435-48
13	2325.2	94.6	3597	12	US-10-190-435-48
14	2295.8	93.4	3624	12	US-10-190-435-47
15	2136	86.9	2460	12	US-10-190-435-30
16	2135	86.9	3564	12	US-10-241-009-13

17	2135	86.9	3564	12	US-10-241-009-14	Sequence 14, Appl
18	2134.4	86.9	4716	12	US-10-190-435-17	Sequence 17, Appl
19	2130.6	86.7	3999	12	US-10-241-009-9	Sequence 9, Appl
20	2129	86.7	3999	12	US-10-241-009-10	Sequence 10, Appl
21	2129	86.7	3999	12	US-10-241-009-11	Sequence 11, Appl
22	2129	86.7	5283	12	US-10-241-009-54	Sequence 54, Appl
23	2128.8	86.6	4713	12	US-10-190-435-59	Sequence 59, Appl
24	2128.4	86.6	3462	12	US-10-190-435-16	Sequence 16, Appl
25	2115.2	86.1	2466	12	US-10-241-009-31	Sequence 31, Appl
26	2103	85.6	3735	12	US-10-241-009-34	Sequence 34, Appl
27	2096	85.3	2472	12	US-10-241-009-32	Sequence 32, Appl
28	2096	85.3	5274	12	US-10-241-009-12	Sequence 12, Appl
29	2019.4	82.2	3636	12	US-10-241-009-56	Sequence 56, Appl
30	1987.2	80.9	3639	12	US-10-241-009-33	Sequence 33, Appl
31	1974.4	80.4	3231	12	US-10-190-435-60	Sequence 60, Appl
32	1969.6	80.2	3234	12	US-10-190-435-50	Sequence 51, Appl
33	1962.4	79.9	1965	12	US-10-190-435-50	Sequence 49, Appl
34	1941.6	79.0	1971	12	US-10-190-435-49	Sequence 49, Appl
35	1912.6	77.8	4773	12	US-10-241-009-16	Sequence 16, Appl
36	1903.8	77.5	3496	12	US-10-241-009-15	Sequence 15, Appl
37	1903.8	77.5	4773	12	US-10-241-009-55	Sequence 55, Appl
38	1853.8	75.4	2145	12	US-10-241-009-35	Sequence 35, Appl
39	1827.6	74.4	2262	12	US-10-241-009-39	Sequence 39, Appl
40	1804.6	73.4	3261	12	US-10-241-009-57	Sequence 57, Appl
41	1800	73.3	3264	12	US-10-241-009-43	Sequence 43, Appl
42	1799.2	73.2	3252	12	US-10-241-009-42	Sequence 42, Appl
43	1792.8	73.0	1977	12	US-10-241-009-46	Sequence 46, Appl
44	1792.8	73.0	1990	12	US-10-241-009-40	Sequence 40, Appl
45	1771.4	72.1	1971	12	US-10-241-009-38	Sequence 38, Appl

ALIGNMENTS

RESULT 1  
US-10-190-435-43  
; Sequence 43, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR HEGEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBERG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: PPI8133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 43  
; LENGTH: 2445  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: p2Pol.opt.YMMW\_C  
US-10-190-435-43

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QY 307 GAGCTGAGAGTGGCGGCGAGCAACCCCGCAGCGAGGCGCGGCGGAGCGGAGCC 366  
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RESULT 2
US-10-190-435-9
; Sequence 9, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEDEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Yang
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10190.435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 9
; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagComplPolmut_C
US-10-190-435-9

Query Match 99.2%; Score 2436.4; DB 12; Length 3930;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 2437; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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QY 374 TCCCGCAGATCACCTGTGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 433
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QY 614 CCCCCTGTGAACATCATCGGCGCAACATGCTGACCCAGCTGGGCTGCACCCCTGAACTTCC 673
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Db 2087 CCCCCTGTGAACATCATCGGCGCAACATGCTGACCCAGCTGGGCTGCACCCCTGAACTTCC 2146
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QY 1394 AGTGTCCCGAGAGGAGAGCTGGAACCGTGAACACATTCAGAGAGCTGTGTGGGCAAGCTGA 1453
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Db 2867 AGTGTCCCGAGAGGAGAGCTGGAACCGTGAACACATTCAGAGAGCTGTGTGGGCAAGCTGA 2926
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QY 1454 ACTGGGCGAGCCAGATCTACCCCGGGCATCAAGGTGGCGCGAGCTGTGCAAGCTGTCTGCGG 1513
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Db 2987 GGGCCAAAGCCCTGACCGGACATCTGCGCCCTGACCGAGAGGCGCGAGCTGGAGCTGGCCG 3046
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QY 1574 AGAACCGCGAGATCTCTGCGCGAGCCCGTGCACGGGTGTACTACGACCCCGCAAGGAGCC 1633
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Db 3047 AGAACCGCGAGATCTCTGCGCGAGCCCGTGCACGGGTGTACTACGACCCCGCAAGGAGCC 3106
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QY 914 ACAAGCGCACCCAGGACTTCTGGAGGTGCGAGCTGGGCATCCGCCACCCCGCGGCTGA 973
Db 2387 ACAAGCGCACCCAGGACTTCTGGAGGTGCGAGCTGGGCATCCGCCACCCCGCGGCTGA 2446
QY 974 AGAAGAAGAAAGAGCGTGAACCGTGTGACGTGGCGACGCGTACTTTCAGCGTGCCTCG 1033
Db 2447 AGAAGAAGAAAGAGCGTGAACCGTGTGACGTGGCGACGCGTACTTTCAGCGTGCCTCG 2506
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QY 1094 GCATCCGCTACCACTACAAAGTGTGCGCCAGAGGCTGGAAGGCGAGCCCGAGATCTTC 1153
Db 2567 GCATCCGCTACCACTACAAAGTGTGCGCCAGAGGCTGGAAGGCGAGCCCGAGATCTTC 2626
QY 1154 AGAGCAGATGACCAAGATCTGAGGCGCTTTCGCGCGCGCAACCCCGAGATGATCT 1213
Db 2627 AGAGCAGATGACCAAGATCTGAGGCGCTTTCGCGCGCGCAACCCCGAGATGATCT 2686
QY 1214 ACCAGGCGCCCGCTGTAGTGGGAGCGACCTGGAGATCGGCCAGCGCGCGCAAGTGC 1273
Db 2687 ACCAGGCGCCCGCTGTAGTGGGAGCGACCTGGAGATCGGCCAGCGCGCGCAAGTGC 2746
QY 1274 AGGAGCTGGCGAAGCAGCTGTGCGCTGGGCTTTCACACCCCGCAACAAAGCACCAGA 1333
Db 2747 AGGAGCTGGCGAAGCAGCTGTGCGCTGGGCTTTCACACCCCGCAACAAAGCACCAGA 2806
QY 1334 AGAGCGCCCGCTTCTGCGCATGAGTGCACCCCGCAAGTGCAGCGTGCAGCGCCATCG 1393
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QY 1394 AGTGTCCCGAGAGGAGAGTGTGACCGTGAACGATCCAGACCTGGTGGGCAAGTGA 1453
Db 2867 AGTGTCCCGAGAGGAGAGTGTGACCGTGAACGATCCAGACCTGGTGGGCAAGTGA 2926
QY 1454 ACTGGGCGACCCAGATCTACCCCGCATCAAGGTGCGCGCATGTGCAAGCTGTGCGCG 1513
Db 2927 ACTGGGCGACCCAGATCTACCCCGCATCAAGGTGCGCGCATGTGCAAGCTGTGCGCG 2986
QY 1514 GCGCAAGGCGCTGACCGAATCGTGCCCTGACCGAGAGGCGAGCTGGAGTGGCGCG 1573
Db 2987 GCGCAAGGCGCTGACCGAATCGTGCCCTGACCGAGAGGCGAGCTGGAGTGGCGCG 3046
QY 1574 AGAACCGGAGATCTCGGCGAGCCCTGCAACGCGTGTACTAGCACCCCGACAGAGACC 1633
Db 3047 AGAACCGGAGATCTCGGCGAGCCCTGCAACGCGTGTACTAGCACCCCGACAGAGACC 3106
QY 1634 TGTTGGCCGAGATCCAGAAGCAGGGCCACGACAGTGGACCTACAGATCTACCGAGGC 1693
Db 3107 TGTTGGCCGAGATCCAGAAGCAGGGCCACGACAGTGGACCTACCGAGGC 3166
QY 1694 CTTTCAAGAACCTGAAGACCGGCAAGTACGCGCAAGATGCGCACCGCCCAACCAACGAGC 1753
Db 3167 CTTTCAAGAACCTGAAGACCGGCAAGTACGCGCAAGATGCGCACCGCCCAACCAACGAGC 3226
QY 1754 TGAAGCAGCTGACCGAGCGCTGCAGAGATCGCCATGGAGAGCATCGTGTCTGGGCA 1813
Db 3227 TGAAGCAGCTGACCGAGCGCTGCAGAGATCGCCATGGAGAGCATCGTGTCTGGGCA 3286
QY 1814 AGACCCCAAGTTCCGCTCGCCATCCAGAAGGAGACCTGGGAGACCTGGTGGACCGACT 1873
Db 3287 AGACCCCAAGTTCCGCTCGCCATCCAGAAGGAGACCTGGGAGACCTGGTGGACCGACT 3346
QY 1874 ACTGGCAGGCCACTGTGATCCCGAGTGGAGTTGTTGAACACCCCGCCCTGGTGAAGC 1933
Db 3347 ACTGGCAGGCCACTGTGATCCCGAGTGGAGTTGTTGAACACCCCGCCCTGGTGAAGC 3406
QY 1934 TGTGGTACCAAGCTGGAGAGCGCCATCATCGGCGCGAGACCTTCTAGTGAAGCGCG 1993
Db 3407 TGTGGTACCAAGCTGGAGAGCGCCATCATCGGCGCGAGACCTTCTAGTGAAGCGCG 3466
QY 1994 CCGCCAAACCGCGAGACCAAGATCGGCAAGGCGGCTACGTGACCGAGCGGCGCGGCGAGA 2053
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Db 3467 CCGCCAAACCGCGAGACCAAGATCGGCAAGGCGCGCTACTGTAGCCGCGGCGGCGAGA 3526
QY 2054 AGATCGTGAAGCTGACCGAGACCAACCAAGAGACCGAGCTGCGAGGCGCATCCAGCTGG 2113
Db 3527 AGATCGTGAAGCTGACCGAGACCAACCAAGAGACCGAGCTGCGAGGCGCATCCAGCTGG 3586
QY 2114 CCGTCAGGACACCGCGAGGAGGTGAACATCGTGAACCGACAGCCAGTAGCGCTTGGGCA 2173
Db 3587 CCGTCAGGACACCGCGAGGAGGTGAACATCGTGAACCGACAGCCAGTAGCGCTTGGGCA 3646
QY 2174 TCATCCAGGCGCCAGCGCCGACAGAGCGAGAGCGAGCTGGTGAACCGAGATCATCGAGCAGC 2233
Db 3647 TCATCCAGGCGCCAGCGCCGACAGAGCGAGAGCGAGCTGGTGAACCGAGATCATCGAGCAGC 3706
QY 2234 TGATCAAGAGGAGAGGTGTACTGAGCTGGGTGCCGCCACAAAGGGCATCGGGGCA 2293
Db 3707 TGATCAAGAGGAGAGGTGTACTGAGCTGGGTGCCGCCACAAAGGGCATCGGGGCA 3766
QY 2294 ACGAGCAGATCGACAGCTGGTGAGCAAGGGCATCCGAGGTGCTTCTTCTGACGCGCA 2353
Db 3767 ACGAGCAGATCGACAGCTGGTGAGCAAGGGCATCCGAGGTGCTTCTTCTGACGCGCA 3826
QY 2354 TCATCGCGCGCATCGTGATCTTACAGTACATGAGACGACCTGTACGTGGGCGAGCGCGCC 2413
Db 3827 TCATCGCGCGCATCGTGATCTTACAGTACATGAGACGACCTGTACGTGGGCGAGCGCGCC 2476
QY 2414 CTAGGATCGATTAAAGCTTCCGGGCGTAGCACCGGT 2451
Db 3887 CTAGGATCGATTAAAGCTTCCGGGCGTAGCACCGGT 3924

RESULT 4
US-10-190-435-11
; Sequence 11, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEDEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagComplPolmutIna_C
US-10-190-435-11
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Query Match 99.1%; Score 2434.8; DB 12; Length 3930;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 2436; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 14 TGGCCGAGGCGCATGAGCCAGGCGCCACCGAGCGCAACATCTGTATGCGAGCGCAACTTCA 73
Db 1487 TGGCCGAGGCGCATGAGCCAGGCGCCACCGAGCGCAACATCTGTATGCGAGCGCAACTTCA 1546
QY 74 AGGGCCCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCAAGGAGGCGCCATCGCCGCGCA 133
Db 1547 AGGGCCCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCAAGGAGGCGCCATCGCCGCGCA 1606
QY 134 ACTGCGCGCGCCCGCCCAAGAGGGCTGTGGAAGTGCAGGAGGCGCCACCATGA 193
Db 1607 ACTGCGCGCGCCCGCCCAAGAGGGCTGTGGAAGTGCAGGAGGCGCCACCATGA 1666
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QY 194 AGGACTGACCGAGCGCCAGGCCAATTCTTCCGCGAGGACTTGCTTCCCGAGGCA 253  
Db 1667 AGGACTGACCGAGCGCCAGGCCAATTCTTCCGCGAGGACTTGCTTCCCGAGGCA 1726  
QY 254 AGGCGCGAGGTTCCCGAGCGAGGAAACCGCGCAAACGCCCAACGCGCGAGCTGC 313  
Db 1727 AGGCGCGAGGTTCCCGAGCGAGGAAACCGCGCAAACGCCCAACGCGCGAGCTGC 1786  
QY 314 AGGCGCGAGGAAACCGCGCGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373  
Db 1787 AGGCGCGAGGAAACCGCGCGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1846  
QY 374 TCCCGCAGATCACTCTGTGCGAGCGCCCTGTGTAGCATCAAGTGGCGCGAGTCA 433  
Db 1847 TCCCGCAGATCACTCTGTGCGAGCGCCCTGTGTAGCATCAAGTGGCGCGAGTCA 1906  
QY 434 AGGAGGCTCTGTGAGACCGCGCGCGCGCGCAACCGTGTGAGAGAGATGAGCTTCCG 493  
Db 1907 AGGAGGCTCTGTGCGAGCGCGCGCGCGCGCAACCGTGTGAGAGATGAGCTTCCG 1966  
QY 494 GCAAGTGGAGCCCAAGATGATGCGCGCGCATTCGCGCGCTTCATCAAGTGGCGAGTACG 553  
Db 1967 GCAAGTGGAGCCCAAGATGATGCGCGCGCATTCGCGCGCTTCATCAAGTGGCGAGTACG 2026  
QY 554 ACCAGATCTGTATGAGATCTGCGCGCAAGAAAGCCATCGCGACCGTGTATCGGCCCA 613  
Db 2027 ACCAGATCTGTATGAGATCTGCGCGCAAGAAAGCCATCGCGACCGTGTATCGGCCCA 2086  
QY 614 CCCCCTGAGCATCATTCGCGCGCGCAACCTGTGACCCGAGCTGGGTGTGACCTTGAATTCC 673  
Db 2087 CCCCCTGAGCATCATTCGCGCGCGCAACCTGTGACCCGAGCTGGGTGTGACCTTGAATTCC 2146  
QY 674 CCATCAGCCCATCAGAGACGCTGCGCGCGTGAAGCTGAAGCCCGGATGAGCGGCCAAG 733  
Db 2147 CCATCAGCCCATCAGAGACGCTGCGCGCGTGAAGCTGAAGCCCGGATGAGCGGCCAAG 2206  
QY 734 TGAAGAGTGGCCCTTGAACCGAGAGAAATCAAGGCCCTGACCGCCATCTGCGAGAGA 793  
Db 2207 TGAAGAGTGGCCCTTGAACCGAGAGAAATCAAGGCCCTGACCGCCATCTGCGAGAGA 2266  
QY 794 TGAAGAGGAGGCGCAAGTACCAAGATCGGCCCGCGAGAACCCCTTACAAACCCCGTGT 853  
Db 2267 TGAAGAGGAGGCGCAAGTACCAAGATCGGCCCGCGAGAACCCCTTACAAACCCCGTGT 2326  
QY 854 TCGCATCAAGAGAGAGACGACCAAGTGGCGCAAGTGTGATTCGCGCGAGCTGA 913  
Db 2327 TCGCATCAAGAGAGAGACGACCAAGTGGCGCAAGTGTGATTCGCGCGAGCTGA 2386  
QY 914 ACAAGCGCACCCAGACTTCTGAGAGTGCAGCTGGGATCCCCAACCCCGCGGCTGA 973  
Db 2387 ACAAGCGCACCCAGACTTCTGAGAGTGCAGCTGGGATCCCCAACCCCGCGGCTGA 2446  
QY 974 AGAAGAGAGAGAGAGAGTGCAGTGTGAGCGTGGCGCAAGCTTCTTCAAGTGTCCCTTG 1033  
Db 2447 AGAAGAGAGAGAGAGTGCAGTGTGAGCGTGGCGCAAGCTTCTTCAAGTGTCCCTTG 2506  
QY 1034 ACCAGGACTTCCGCAAGTACACCGCTTCAACATCCCGACATCAACAGAACCCCGC 1093  
Db 2507 ACCAGGACTTCCGCAAGTACACCGCTTCAACATCCCGACATCAACAGAACCCCGC 2566  
QY 1094 GCATTCGCGTACCGTACAGTGTGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1153  
Db 2567 GCATTCGCGTACCGTACAGTGTGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2626  
QY 1154 AGAGCAGCATGACCAAGATCTGTGAGCGCTTCCGCGCGCGCGCAACCCCGAGATGATCT 1213  
Db 2627 AGAGCAGCATGACCAAGATCTGTGAGCGCTTCCGCGCGCGCGCAACCCCGAGATGATCT 2686  
QY 1214 ACCAGGCGCGCGCGTGTACGTGGCGCGACCTTGAGATCGCGCGAGCACCGCGCAAGATCG 1273  
Db 2687 ACCAGGCGCGCGCGTGTACGTGGCGCGACCTTGAGATCGCGCGAGCACCGCGCAAGATCG 2746  
QY 1274 AGGAGCTGGCGAAGCAGCTGCTGCGGTGGGCTTCAACACCCCGAGCAAGAGCACAG 1333

Db 2747 AGGAGCTGGCGAAGCAGCTGCTGCGGTGGGCTTCAACACCCCGAGCAAGAGCACAG 2806  
QY 1334 AGGAGCGCGCGCTTCTGTGCGCATGAGCTGCACCCCGCAAGTGAACCGTGCAGCCCATCG 1393  
Db 2807 AGGAGCGCGCGCTTCTGTGCGCATGAGCTGCACCCCGCAAGTGAACCGTGCAGCCCATCG 2866  
QY 1394 AGCTGCGCGAGAGAGAGTGTGAGCCGTGAACGATCCAGAAAGCTGTGGGCAAGCTGA 1453  
Db 2867 AGCTGCGCGAGAGAGAGTGTGAGCCGTGAACGATCCAGAAAGCTGTGGGCAAGCTGA 2926  
QY 1454 ACTGGGCGAGCAGATCTACCCCGGATCAAGTGGCGGAGCTGTGCAAGCTGTGGCGG 1513  
Db 2927 ACTGGGCGAGCAGATCTACCCCGGATCAAGTGGCGGAGCTGTGCAAGCTGTGGCGG 2986  
QY 1514 GCGCGAAGGCGCTGACCGCATGTGCGCTTGAACCGAGAGGCGGAGCTGTGAGCTGGCG 1573  
Db 2987 GCGCGAAGGCGCTGACCGCATGTGCGCTTGAACCGAGAGGCGGAGCTGTGAGCTGGCG 3046  
QY 1574 AGAACCGGAGATCTGTGCGCGAGCCCGTGCACAGGCGTGTACTACGACCCCGCAAGACC 1633  
Db 3047 AGAACCGGAGATCTGTGCGCGAGCCCGTGCACAGGCGTGTACTACGACCCCGCAAGACC 3106  
QY 1634 TGTGCGCGAGATCCAGAAAGAGGCGACGACAGTGAACCTTACAGATCTACAGAGAGC 1693  
Db 3107 TGTGCGCGAGATCCAGAAAGAGGCGACGACAGTGAACCTTACAGATCTACAGAGAGC 3166  
QY 1694 CTTTCAAGAACTGAAAGACCGGCAAGTACCGCAAGTGGCGCACCGCCCAACCAAGACG 1753  
Db 3167 CTTTCAAGAACTGAAAGACCGGCAAGTACCGCAAGTGGCGCACCGCCCAACCAAGACG 3226  
QY 1754 TGAAGCAGCTGACCGAGGCGGTGCGAGATGCGCATGAGAGCATCGATCTGGGGCA 1813  
Db 3227 TGAAGCAGCTGACCGAGGCGGTGCGAGATGCGCATGAGAGCATCGATCTGGGGCA 3286  
QY 1814 AAGACCCCAAGTTCCGCTGCCATCCAGAAAGAGACTTGGAGACCTTGTGACCGACT 1873  
Db 3287 AAGACCCCAAGTTCCGCTGCCATCCAGAAAGAGACTTGTGACCGACTTGTGACCGACT 3346  
QY 1874 ACTGGAGGCGCACCTGAGATCCCGGAGTGGAGTTGTGAACACCCCGCTGTGTAAAGC 1933  
Db 3347 ACTGGAGGCGCACCTGAGATCCCGGAGTGGAGTTGTGTAAACACCCCGCTGTGTAAAGC 3406  
QY 1934 TGTGTACAGCTGAGAGAGAGAGCCCATCATGCGCGCGAGACCTTCTACGTGAAGGCG 1993  
Db 3407 TGTGTACAGCTGAGAGAGAGAGCCCATCATGCGCGCGAGACCTTCTACGTGAAGGCG 3466  
QY 1994 CCGCACAACCGGAGACCAAGATCGGCAAGCGGCTACGTGAACCGACCGGCGCGGAG 2053  
Db 3467 CCGCACAACCGGAGACCAAGATCGGCAAGCGGCTACGTGAACCGACCGGCGCGGAG 3526  
QY 2054 AGATGCTGAGCTGACCGAGACCAACCAACCAAGAGCGAGCTGAGGCGCATCGACTGG 2113  
Db 3527 AGATGCTGAGCTGACCGAGACCAACCAACCAAGAGCGAGCTGAGGCGCATCGACTGG 3586  
QY 2114 CCTGCGAGGACGCGGAGCGAGGTGAACATGCTGAACCGAGACCGAGTACCGGCTGGGCA 2173  
Db 3587 CCTGCGAGGACGCGGAGCGAGGTGAACATGCTGAACCGAGACCGAGTACCGGCTGGGCA 3646  
QY 2174 TCATCCAGGCCAGCCCGCAAGAGCGAGAGCGAGCTGTGAACCAAGATCATGAGCAGC 2233  
Db 3647 TCATCCAGGCCAGCCCGCAAGAGCGAGAGCGAGCTGTGAACCAAGATCATGAGCAGC 3706  
QY 2234 TGAATCAAGAGAGAGAGTGTACCTGAGCTGTGCTCCCGCAAGAGGATTCGGCGGCA 2293  
Db 3707 TGAATCAAGAGAGAGAGTGTACCTGAGCTGTGCTCCCGCAAGAGGATTCGGCGGCA 3766  
QY 2294 ACAGCAGATTCAGCAGCTGTGAGCAAGGCGATCCGCAAGGTGTCTTCTGAGCGGCA 2353  
Db 3767 ACAGCAGATTCAGCAGCTGTGAGCAAGGCGATCCGCAAGGTGTCTTCTGAGCGGCA 3826  
QY 2354 TCGATGGCGGCACTGTGATCTTACAGTACATGAGCAGACTGTACCTGTGGCAGCGGCGC 2413

Db 3827 TCGATGGCGCATCGTGTATCTACAGTATCATGACGACCTGTATCGTGGCAGCGCGGCC 3886  
Qy 2414 CTAGATCGATTAAGGTTTCCGGGCTAGCACCGGT 2451  
Db 3887 CTAGATCGATTAAGGTTTCCGGGCTAGCACCGGT 3924

RESULT 5  
US-10-190-435-58  
; Sequence 58, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MESEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: P18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn ver. 2.0  
; SEQ ID NO 58  
; LENGTH: 5184  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: TatRevNefgagQpola C  
US-10-190-435-58

Query Match 99.1%; Score 2434.8; DB 12; Length 5184;  
Best Local Similarity 99.9%; Pred. No. 0;  
Matches 2436; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 14 TGGCCGAGGCCATGACGAGCCACCGAGCGCAACATCTCTGATGAGCGAGCAACTTCA 73  
Db 2741 TCGCCGAGGCCATGAGCAGCGCCACCGAGCGCAACATCTCTGATGAGCGAGCAACTTCA 2800

Qy 74 AGGCCCCAAGCGCATCATCAAGTGTTCATCTGCGGCAAGAGGGGCCACATCGCCGCA 133  
Db 2801 AGGCCCCAAGCGCATCATCAAGTGTTCATCTGCGGCAAGAGGGGCCACATCGCCGCA 2860

Qy 134 ACTCCGCGCCCGCGGCAAGAGGGCTCTGAGAGTGGCGGCAAGAGGGGCCACAGATGA 193  
Db 2861 ACTCCGCGCCCGCGGCAAGAGGGCTCTGAGAGTGGCGGCAAGAGGGGCCACAGATGA 2920

Qy 194 AGGACTGACCGAGCGCGCGAGCCCAACTTCTTCCGCGAGGACCTGGCCCTTCCCGCAGGGCA 253  
Db 2921 AGGACTGACCGAGCGCGCGAGCCCAACTTCTTCCGCGAGGACCTGGCCCTTCCCGCAGGGCA 2980

Qy 254 AGGCCCCGAGTTCCGAGCGAGCAGAAACCGCGCAACAGCCCCACAGCGCGAGTGC 313  
Db 2981 AGGCCCCGAGTTCCGAGCGAGCAGAAACCGCGCAACAGCCCCACAGCGCGAGTGC 3040

Qy 314 AGGTGCGGGGCAACCCCCGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373  
Db 3041 AGGTGCGGGGCAACCCCCGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3100

Qy 374 TCCCCCAGATCACCTGTGGCAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 433  
Db 3101 TCCCCCAGATCACCTGTGGCAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3160

Qy 434 AGGAGGCCCTCTGGACACCG 493  
Db 3161 AGGAGGCCCTCTGGACACCG 3220

Qy 494 GCAAGTGGAGCCCAAGATGATCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 553  
Db 3221 GCAAGTGGAGCCCAAGATGATCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3280

Qy 554 ACCAGATCCTGTATCGAGATCTGCGGCAAGAGGCCATCGGCAACCGTGTGTATCGCGCCCA 613

Db 3281 ACCAGATCCTGTATCGAGATCTCGCGCAAGAGGCCATCGGCACCGTGTGTATCGGCCCA 3340  
Qy 614 CCCCCTGTAACATCATCGCGCGCAACATGTGTGACCCAGCTGGGTGACACCCCTGAACTTCC 673  
Db 3341 CCCCCTGTAACATCATCGCGCGCAACATGTGTGACCCAGCTGGGTGACACCCCTGAACTTCC 3400

Qy 674 CCATCAGCCCATGAGACCGTGTCCCTGTAAGCTGAAGCCCGGATGAGACGGCCCAAGG 733  
Db 3401 CCATCAGCCCATGAGACCGTGTCCCTGTAAGCTGAAGCCCGGATGAGACGGCCCAAGG 3460

Qy 734 TGAAGCAGTGGCCCTCATCCGAGGAGAGATCAAGGCCCTGACCGCCATCTGCGAGAGGA 793  
Db 3461 TGAAGCAGTGGCCCTCATCCGAGGAGAGATCAAGGCCCTGACCGCCATCTGCGAGAGGA 3520

Qy 794 TGGAGAAGGAGGCAAGATCACCAAGATCGCCCCCGAGAACCCCTCAACAACCCCGCTGT 853  
Db 3521 TGGAGAAGGAGGCAAGATCACCAAGATCGCCCCCGAGAACCCCTCAACAACCCCGCTGT 3580

Qy 854 TCGCCATCAAGAGAAGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAG 913  
Db 3581 TCGCCATCAAGAGAAGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAG 3640

Qy 914 ACAAGCGCACCCAGGACTTCTGGGAGGTGCAGCTGGGCATCCCCCACCCTCCCGCCCTGA 973  
Db 3641 ACAAGCGCACCCAGGACTTCTGGGAGGTGCAGCTGGGCATCCCCCACCCTCCCGCCCTGA 3700

Qy 974 AGAAGAAGAGAGCGTGAACGCTGTGACCTGGGCGACGCTACTTTCAGCGTGGCCCTGG 1033  
Db 3701 AGAAGAAGAGAGCGTGAACGCTGTGACCTGGGCGACGCTACTTTCAGCGTGGCCCTGG 3760

Qy 1034 ACAGGAGCTTCCGCAAGTACACCGCTTACCTCCCGCAGCATCAACAAGAGACCCCGC 1093  
Db 3761 ACAGGAGCTTCCGCAAGTACACCGCTTACCTCCCGCAGCATCAACAAGAGACCCCGC 3820

Qy 1094 GCATCCCTTACCAGTACAAGCTGTGCCCCAGGSGCTGGAAGGGCAGCCCCCAGCATCTTCC 1153  
Db 3821 GCATCCCTTACCAGTACAAGCTGTGCCCCAGGSGCTGGAAGGGCAGCCCCCAGCATCTTCC 3880

Qy 1154 AGAGCAGCATGACCAAGATCTGTGAGCCCTTCCGCGCCCGCAACCCCGAGATCTGTATCT 1213  
Db 3881 AGAGCAGCATGACCAAGATCTGTGAGCCCTTCCGCGCCCGCAACCCCGAGATCTGTATCT 3940

Qy 1214 ACCAGCCCCCTGTAGTGGGAGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAG 1273  
Db 3941 ACCAGCCCCCTGTAGTGGGAGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAG 4000

Qy 1274 AGGAGCTTGGCCAAAGCACCTCTGCTGGGCTTCAACACCCCGCAACAAGACACCA 1333  
Db 4001 AGGAGCTTGGCCAAAGCACCTCTGCTGGGCTTCAACACCCCGCAACAAGACACCA 4060

Qy 1334 AGAGCCCCCTTCTGTGCCATGAGTGCACCCCGCAAGTGGACCGTGGAGCCCATCG 1393  
Db 4061 AGAGCCCCCTTCTGTGCCATGAGTGCACCCCGCAAGTGGACCGTGGAGCCCATCG 4120

Qy 1394 AGTGTCCGAGAGGAGAGTGCACCGTGAACGACATCCAGAGCTGGTGGGCAAGTGA 1453  
Db 4121 AGTGTCCGAGAGGAGAGTGCACCGTGAACGACATCCAGAGCTGGTGGGCAAGTGA 4180

Qy 1454 ACTGGGCCAGCCAGATCTACCCCGGATCAAGGTGGCCAGCTGTGCAAGCTGTGGCGG 1513  
Db 4181 ACTGGGCCAGCCAGATCTACCCCGGATCAAGGTGGCCAGCTGTGCAAGCTGTGGCGG 4240

Qy 1514 GCGCCAAAGGCCCTGACGACATCTGTCCTGTGACCGAGAGGCGGAGCTGGAGCTGGCCG 1573  
Db 4241 GCGCCAAAGGCCCTGACGACATCTGTCCTGTGACCGAGAGGCGGAGCTGGAGCTGGCCG 4300

Qy 1574 AGAACCGCGAGATCTCGCGGAGCCCGTGCACCGCGTGTACTACGACCCCGCAGCAAGGAC 1633  
Db 4301 AGAACCGCGAGATCTCGCGGAGCCCGTGCACCGCGTGTACTACGACCCCGCAGCAAGGAC 4360

Qy 1634 TGTGTGCGGAGATCCCAAGAGCAGGGCCACACAGCTGGACCTACAGATCTTACAGGAGC 1693

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Db 4361 TGTGCGCGAGATCCAGAAAGGCGACGACGATGAGACCTTACAGATCTACCGAGAGC 4420
Qy 1694 CCTTCAAGAACTGAAGACCGGCAAGTACGCGCAAGATGCGCACCGCCACCAAGAGCG 1753
Db 4421 CCTTCAAGAACTGAAGACCGGCAAGTACGCGCAAGATGCGCACCGCCACCAAGAGCG 4480
Qy 1754 TGAAGCAGCTGACCGGAGCGCTGCGAAGATGCGCATGAGAGCATGATCTGAGGCA 1813
Db 4481 TGAAGCAGCTGACCGGAGCGCTGCGAAGATGCGCATGAGAGCATGATCTGAGGCA 4540
Qy 1814 AGACCCCAAGTTCGCTGCGCATCCAGAAAGAGACCTTGGAGACTTGTGTGACCGACT 1873
Db 4541 AGACCCCAAGTTCGCTGCGCATCCAGAAAGAGACCTTGGAGACTTGTGTGACCGACT 4600
Qy 1874 ACTGCGAGCGCACCTGGATCCCGAGTGGAGTTCCGAAACCCCCCTTGTGTGAGC 1933
Db 4601 ACTGCGAGCGCACCTGGATCCCGAGTGGAGTTCCGAAACCCCCCTTGTGTGAGC 4660
Qy 1934 TGTGTGACCACTGAGAGAGAGCCATCATCGCGCCGAGACCTTCTACGTGACCGCG 1993
Db 4661 TGTGTGACCACTGAGAGAGAGCCATCATCGCGCCGAGACCTTCTACGTGACCGCG 4720
Qy 1994 CCGCCCAACCGCGAGACCAAGATCGGAGCGCGCTTACGTGACCGAGCGCGGAGCA 2053
Db 4721 CCGCCCAACCGCGAGACCAAGATCGGAGCGCGCTTACGTGACCGAGCGCGGAGCA 4780
Qy 2054 AGATCGTGAAGCTGACCGGAGACCAAGATCGGAGCGCGCTTACGTGACCGAGCTG 2113
Db 4781 AGATCGTGAAGCTGACCGGAGACCAAGATCGGAGCGCGCTTACGTGACCGAGCTG 4840
Qy 2114 CCTTGCAGGACAGCGGAGAGGAGTGAACATCTGTGACCGAGCGAGCTACGCTTGGCA 2173
Db 4841 CCTTGCAGGACAGCGGAGAGGAGTGAACATCTGTGACCGAGCGAGCTACGCTTGGCA 4900
Qy 2174 TCATCCAGGCGCCGAGCGGAGCAAGAGCGAGCGAGCTGAGAACAGATATGAGAGAGC 2233
Db 4901 TCATCCAGGCGCCGAGCGGAGCAAGAGCGAGCGAGCTGAGAACAGATATGAGAGAGC 4960
Qy 2234 TGATCAAGAAAGAGAGTGTACTGAGTGGGTGCGCGCCCAAGAGGAGTGGCGGCA 2293
Db 4961 TGATCAAGAAAGAGAGTGTACTGAGTGGGTGCGCGCCCAAGAGGAGTGGCGGCA 5020
Qy 2294 ACAGAGAGATCGACAGCTGTGTGAGCAAGGCGATCCGCAAGGTGTCTTCTGTGAGGCA 2353
Db 5021 ACAGAGAGATCGACAGCTGTGTGAGCAAGGCGATCCGCAAGGTGTCTTCTGTGAGGCA 5080
Qy 2354 TCGATGCGGCGCATCGTGTACTTACACAGTACAGTGAACCTGTAGTGGGAGAGGCGGCG 2413
Db 5081 TCGATGCGGCGCATCGTGTACTTACACAGTACAGTGAACCTGTAGTGGGAGAGGCGGCG 5140
Qy 2414 CTAGGATCGATTAAAGCTTCCCGGGGCTAGACCGGT 2451
Db 5141 CTAGGATCGATTAAAGCTTCCCGGGGCTAGACCGGT 5178

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RESULT 6
US-10-190-435-44
; Sequence 44, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBROCHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190.435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 44

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; LENGTH: 2457
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2Poliopt.YM_C
US-10-190-435-44

Query Match      98.8%; Score 2428.6; DB 12; Length 2457;
Best Local Similarity 99.6%; Pred. No. 0;
Matches 2447; Conservative 0; Mismatches 4; Indels 6; Gaps 1;

Qy 1 GTGACGCCACCATGAGCGGAGCGATGAGCCAGGCGCACAGCGCCAAATCTGTATGAG 60
Db 1 GTGACGCCACCATGAGCGGAGCGATGAGCCAGGCGCACAGCGCCAAATCTGTATGAG 60
Qy 61 CGGAGCACTTCAAGGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGCG 120
Db 61 CGGAGCACTTCAAGGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGCG 120
Qy 121 CACATGCGCCGCAACTGCGCGCGCGCGCGCGCAAGAGGCGTGTGAAAGTGGCGCAAGAG 180
Db 121 CACATGCGCCGCAACTGCGCGCGCGCGCGCGCAAGAGGCGTGTGAAAGTGGCGCAAGAG 180
Qy 181 GCGCACAGATGAAGAGACTGCAACGAGCGCCAGGCCAATTCTTCCGCAAGAGACTGGCC 240
Db 181 GCGCACAGATGAAGAGACTGCAACGAGCGCCAGGCCAATTCTTCCGCAAGAGACTGGCC 240
Qy 241 TTCCCGGAGGAGGAGCGCGCGAGTTCCCGAGCGAGAAACCGCGCCAAAGCCCGCAC 300
Db 241 TTCCCGGAGGAGGAGCGCGCGAGTTCCCGAGCGAGAAACCGCGCCAAAGCCCGCAC 300
Qy 301 AGCGCGAGCTGAGAGGCGCGCGAGCAACCCCGAGCGAGGCGCGCCGAGCGCCAG 360
Db 301 AGCGCGAGCTGAGAGGCGCGCGAGCAACCCCGAGCGAGGCGCGCCGAGCGCCAG 360
Qy 361 GGGACCTTGAATTCTCCCGAGATCACTCTGTGGAGCGCCCTGTGTGAGCATCAAGGTG 420
Db 361 GGGACCTTGAATTCTCCCGAGATCACTCTGTGGAGCGCCCTGTGTGAGCATCAAGGTG 420
Qy 421 GGGGCGCATATGAAGAGGCGCTGCGTGGAGCAACCGGCGCGAGACACGCTGTGAGAGAG 480
Db 421 GGGGCGCATATGAAGAGGCGCTGCGTGGAGCAACCGGCGCGAGACACGCTGTGAGAGAG 480
Qy 481 ATGAGGCTTCCCGGAGAGTGAAGCCCAAGATGATCGGCGGCGATCGCGGCTTCAATCAAG 540
Db 481 ATGAGGCTTCCCGGAGAGTGAAGCCCAAGATGATCGGCGGCGATCGCGGCTTCAATCAAG 540
Qy 541 GTGCGCGAGTACGACCAAGTCTGTATCGAGATCTCGGCAAGAGGCGCATCGGCAACCGTG 600
Db 541 GTGCGCGAGTACGACCAAGTCTGTATCGAGATCTCGGCAAGAGGCGCATCGGCAACCGTG 600
Qy 601 CTGATGCGGCGGAGCGCGCGTGAACATCATCGGCGCGCAACATGCTGACCCAGCTGGCTGC 660
Db 601 CTGATGCGGCGGAGCGCGCGTGAACATCATCGGCGCGCAACATGCTGACCCAGCTGGCTGC 660
Qy 661 AOCCTGAACCTTCCCATCAGCCCATCGAGACCGTGTCCGTGAACCTGAAGCCCGGCATG 720
Db 661 AOCCTGAACCTTCCCATCAGCCCATCGAGACCGTGTCCGTGAACCTGAAGCCCGGCATG 720
Qy 721 GACGCGCCCAAGGTGAAGAGTGGCCCTGACCGGAGAGAGATCAAGGCTTGAACCGGC 780
Db 721 GACGCGCCCAAGGTGAAGAGTGGCCCTGACCGGAGAGAGATCAAGGCTTGAACCGGC 780
Qy 781 ATCTGAGAGAGATGAGAGAGGAGGAGAGATCAAGAGATGAGGCGCGGAGAACCCCTAC 840
Db 781 ATCTGAGAGAGATGAGAGAGGAGGAGAGATCAAGAGATGAGGCGCGGAGAACCCCTAC 840
Qy 841 AACACCCCGGTTTCCCATCAAGAGAGAGAGAGAGAGATCAAGAGTGGCGCAAGTGTGTGAGC 900
Db 841 AACACCCCGGTTTCCCATCAAGAGAGAGAGAGAGAGATCAAGAGTGGCGCAAGTGTGTGAGC 900
Qy 901 TTCCGAGAGCTGAACAGCGCACCGAGACTTCTGGAGGTGAGAGTGGGCGATCCCCCAC 960

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Db 901 TTCCGGAGCTGAACAAGCGCACCCAGGACTTCTGGAGGTGCGAGCTGGGCATCCCCCAG 960
Qy 961 CCGCGCGGCTGAAGAAGAGAGAGCGTGACCGTGTGACGTGTGACGTGGCGAGCGCTACTTC 1020
Db 961 CCGCGCGGCTGAAGAAGAGAGAGCGTGACCGTGTGACGTGTGACGTGGCGAGCGCTACTTC 1020
Qy 1021 AGCGTGCCCTGACAGAGGACTTCGCGAAGTACACCGCCCTTCCACATCCCCAGCATCAAC 1080
Db 1021 AGCGTGCCCTGACAGAGGACTTCGCGAAGTACACCGCCCTTCCACATCCCCAGCATCAAC 1080
Qy 1081 AACGAGACCCCGGCGATCCGCTACCACTAACAAGTGTGCCCCAGAGGCGAGC 1140
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Qy 1141 CCCAGATCTTCAGAGCAGCATGACCAAGATCTTGAGCCCTTCGCGCCGCCACACCC 1200
Db 1141 CCCAGATCTTCAGAGCAGCATGACCAAGATCTTGAGCCCTTCGCGCCGCCACACCC 1200
Qy 1201 GAGATCGTGATCTACAGAGGCCCGCTGTAGTGGGCGAGCGACCTGGAGATCGGCGACAC 1260
Db 1201 GAGATCGTGATCTACAGAGGCCCGCTGTAGTGGGCGAGCGACCTGGAGATCGGCGACAC 1260
Qy 1261 CGCGCAAGATCAGAGAGCTGGCGAAGCACTGCTGCGCTGGGCTTCAACACCCCGGAC 1320
Db 1261 CGCGCAAGATCAGAGAGCTGGCGAAGCACTGCTGCGCTGGGCTTCAACACCCCGGAC 1320
Qy 1321 AAGAAGCACAGAGAGGCCCGCTTCTGCGCCAT-----CGAGCTGCACCCGCAAG 1374
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Qy 1375 TGGACCGTGCAGGCCATCGAGCTGCCGGAAGAGAGCTGGACCGTGAACGACATCCAG 1434
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Qy 1435 AAGCTGTGGCGAAGCTGAAGTGGGCGAGCGAGATCTACCGCGCATCAAGTGGCGGAG 1494
Db 1441 AAGCTGTGGCGAAGCTGAAGTGGGCGAGCGAGATCTACCGCGCATCAAGTGGCGGAG 1500
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Db 1501 CTGTGCAAGCTGTGCGCGCGCCAGCGCCCTGACGACATCTGCGCCCTGACCGGAGG 1560
Qy 1555 GCGAGCTGGAGCTGGCGGAGAACCGGAGATCTGCGCGAGCCCGTGGACGCGGTGAC 1614
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Db 1621 TAGACCCCGAAGAGCTGTGGTGGCGAGATCCAGAAAGAGGCGCACGACAGTGGACC 1680
Qy 1675 TACAGATCTACAGAGGCGCTTCAAGAACTGAAGACCGGCAAGTACGCAAGATCGCG 1734
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Qy 1735 ACCGCCACACCAACGAGCTGAAGAGCTGACCGAGGCGCGTGGCAGAAAGATCGCCATGGAG 1794
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Qy 1855 GAGACCTGTGGACCGACTGTGCGAGCGCACCTGGATCCCGAGTGGGAGTTCGTGAAC 1914
Db 1861 GAGACCTGTGGACCGACTGTGCGAGCGCACCTGGATCCCGAGTGGGAGTTCGTGAAC 1920
Qy 1915 ACCCCCCCTGTGTGAAGCTGTGTATACAGTGGAGAGAGGCCATCATCGGCGCGAG 1974
Db 1921 ACCCCCCCTGTGTGAAGCTGTGTATACAGTGGAGAGAGGCCATCATCGGCGCGAG 1980
Qy 1975 ACCTTCTACGTGAGCGCGCGCAACCGCGAGACCAAGATCGGCAAGGCGCGCTACGTG 2034
Db 1981 ACCTTCTACGTGAGCGCGCGCAACCGCGAGACCAAGATCGGCAAGGCGCGCTACGTG 2040
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Qy 2095 CTGACAGCCCATCAGCTGGCCCTGACAGGACAGCGGCGAGGAGTGAACATCTGTCAGCCGAC 2154
Db 2101 CTGACAGCCCATCAGCTGGCCCTGACAGGACAGCGGCGAGGAGTGAACATCTGTCAGCCGAC 2160
Qy 2155 AGCCAGTACGCCCTTGGGCTCATCTCAGGGCCAGCCCGCAAGAGAGCGAGAGCTGGTG 2214
Db 2161 AGCCAGTACGCCCTTGGGCTCATCTCAGGGCCAGCCCGCAAGAGAGCGAGAGCTGGTG 2220
Qy 2215 AACACATCATCAGCAGCTGTATCAAGAAGGAGAGGTGTACCTGAGCTGGGTGCCCGCC 2274
Db 2221 AACACATCATCAGCAGCTGTATCAAGAAGGAGAGGTGTACCTGAGCTGGGTGCCCGCC 2280
Qy 2275 CACAAGGGCATCGCGGCAACGAGCAGATCGACAAGCTGGTGAAGCAAGGSCATCCGCAAG 2334
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Qy 2335 GTGCTTTCTGACCGGCTCGATGGCGGATCGTGTATCCAGTACATGAGAGACCTG 2394
Db 2341 GTGCTTTCTGACCGGCTCGATGGCGGATCGTGTATCCAGTACATGAGAGACCTG 2400
Qy 2395 TAGCTGGCAGCGCGGCCCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 2451
Db 2401 TAGCTGGCAGCGCGGCCCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 2457
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## RESULT 7

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US-10-190-435-13
; Sequence 13, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEDEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 13
; LENGTH: 3531
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagPolmut_C
US-10-190-435-13
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Query Match 97.9%; Score 2404.4; DB 12; Length 3531;
Best Local Similarity 99.1%; Pred. No. 0;
Matches 2417; Conservative 0; Mismatches 21; Indels 0; Gaps 0;

Qy 14 TGGCCGAGGCGCATGAGCCAGGCGCACCGCGCCCAACATCTGTATGCGCGCAACATTCA 73
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Qy 74 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGGCCACATCGCCGCA 133
Db 1148 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGGCCACATCGCCGCA 1207
Qy 134 ACTGCGCGCCCCCGCCAAAGAGGGCTGCTGGAAGTGGCGCAAGGAGGGCCACAGATGA 193
Db 1208 ACTGCGCGCCCCCGCCAAAGAGGGCTGCTGGAAGTGGCGCAAGGAGGGCCACAGATGA 1267
Qy 194 AGGACTGCACCGAGCGCCAGGCCAATCTTCTCGCGAGGACCTTCTCCCGGAGGCA 253
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Db 1328 AGGCGCGGAGTTCCCGAGAGAGAGAACCGCGCAACAGCCCAACGACCGGAGCTGC 1387  
QY 314 AGGTGCGCGGAGCAACCCCGCAGCAGAGCGCGCGCGCAAGCGCCAGGCAACCTYACT 373  
Db 1388 AGGTGCGCGGAGCAACCCCGCAGCAGAGCGCGCGCGCAAGCGCCAGGCAACCTYACT 1447  
QY 374 TCCCGCAGATCACTCTGTGCGAGCGCCCTGTGTGACATCAAGTGGGCGCGAGATCA 433  
Db 1448 TCCCGCAGATCACTCTGTGCGAGCGCCCTGTGTGACATCAAGTGGGCGCGAGATCA 1507  
QY 434 AGGAGGCGCTGTGAGCAACCGCGCGCGAGCAACCGGTGAGAGAGATAGAGCTGCGCG 493  
Db 1508 AGGAGGCGCTGTGAGCAACCGCGCGCGAGCAACCGGTGAGAGAGATAGAGCTGCGCG 1567  
QY 494 GCAAGTGAAGCCCAAGATGATCGCGCGCATTCGCGCGCTTCATCAAGTGCAGATACG 553  
Db 1568 GCAAGTGAAGCCCAAGATGATCGCGCGCATTCGCGCGCTTCATCAAGTGCAGATACG 1627  
QY 554 ACCAGATCTTGATCGAGATCTTGCGGCAAGAGGCCATCGGCACTGTGCTGATCGGCCA 613  
Db 1628 ACCAGATCTTGATCGAGATCTTGCGGCAAGAGGCCATCGGCACTGTGCTGATCGGCCA 1687  
QY 614 CCCCCGTGAACATCATCGCGCGCGCAACATGCTGACCCGCTGAGGCTGACCCCTGAATTC 673  
Db 1688 CCCCCGTGAACATCATCGCGCGCGCAACATGCTGACCCGCTGAGGCTGACCCCTGAATTC 1747  
QY 674 CCATCAAGCCCATCGAGACCGTGCCTGTGAAGCTGAAGCCCGGCGATGAGCGGCCCAAG 733  
Db 1748 CCATCAAGCCCATCGAGACCGTGCCTGTGAAGCTGAAGCCCGGCGATGAGCGGCCCAAG 1807  
QY 734 TGAAGAGTGGCCCCCTGACCGGAGAGAGATCAAGGCCCTGACCGGCTATCTGAGAGAGA 793  
Db 1808 TGAAGAGTGGCCCCCTGACCGGAGAGAGATCAAGGCCCTGACCGGCTATCTGAGAGAGA 1867  
QY 794 TGAAGAGAGGAGGAGAGATCAAGATCGAGCGCCCGGAGAACCCCTCAACACCCCGGTG 853  
Db 1868 TGAAGAGAGGAGGAGAGATCAAGATCGAGCGCCCGGAGAACCCCTCAACACCCCGGTG 1927  
QY 854 TCGCATCAAGAGAGAGAGACGACCAAGTGGCGCAAGCTGTGACTTCGCGAGCTGA 913  
Db 1928 TCGCATCAAGAGAGAGAGACGACCAAGTGGCGCAAGCTGTGACTTCGCGAGCTGA 1987  
QY 914 ACAAGGCAACCGGAGCTTCTGGAGAGTGCAGCTGGGCAATCCCGACCCCGCGGCTGA 973  
Db 1988 ACAAGGCAACCGGAGCTTCTGGAGAGTGCAGCTGGGCAATCCCGACCCCGCGGCTGA 2047  
QY 974 AGAAGAGAGAGACCGTGAACCGTGTGACGTGGGCGACGCTTACGCTGACGCTGG 1033  
Db 2048 AGAAGAGAGAGACCGTGAACCGTGTGACGTGGGCGACGCTTACGCTGACGCTGG 2107  
QY 1034 ACAGAGACTTCCGCAAGTACACCGCTTCAACATCCCAAGCATCAACAGAGACCCCG 1093  
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QY 1094 GATCGGCTACCGTCAACGCTGCGCCCGCAGAGGCTGAGAGGCGACCCAGATCTTCC 1153  
Db 2168 GATCGGCTACCGTCAACGCTGCGCCCGCAGAGGCTGAGAGGCGACCCAGATCTTCC 2227  
QY 1154 AGAGAGCATGACCAAGATCTGTGAGCCCTTCGCGCGCGCAACCCCGAGATGATCT 1213  
Db 2228 AGAGAGCATGACCAAGATCTGTGAGCCCTTCGCGCGCGCAACCCCGAGATGATCT 2287  
QY 1214 ACCAGGCGCGCTGTACGTGGGAGAGACTTGAAGATCGGCGAGCAACCGCGCAAGATG 1273  
Db 2288 ACCAGGCGCGCGCTGTACGTGGGAGAGACTTGAAGATCGGCGAGCAACCGCGCAAGATG 2347  
QY 1274 AGAGAGTGGCGAGAGCACTGTGCGGCTTCAACCCCGCAAGAGAGACACAGA 1333  
Db 2348 AGAGAGTGGCGAGAGCACTGTGCGGCTTCAACCCCGCAAGAGAGACACAGA 2407

QY 1334 AGAGGCGCGCGCTTCTGCGCCCATCGAGCTGACCCCGCAAGTGAACCGTGCAGGCCATG 1393  
Db 2408 AGAGGCGCGCGCTTCTGCGCCCATCGAGCTGACCCCGCAAGTGAACCGTGCAGGCCATG 2467  
QY 1394 AGGTGCCGAGAGAGAGAGCTGGAACCGTGAACGACATCGAGAGAGCTGTGGGCAAGCTGA 1453  
Db 2468 AGGTGCCGAGAGAGAGAGCTGGAACCGTGAACGACATCGAGAGAGCTGTGGGCAAGCTGA 2527  
QY 1454 ACTGGGCGACGAGATCTACCCCGCATCAAGTGGCGCAGCTGTGCAAGCTGCTGCGG 1513  
Db 2528 ACTGGGCGACGAGATCTACCCCGCATCAAGTGGCGCAGCTGTGCAAGCTGCTGCGG 2587  
QY 1514 GCGCGAAGGCGCTGACCGGCAATGTGCGCCCTTACCGAGAGGCGCGAGCTGAGCTGCGG 1573  
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QY 1574 AGAAGCGAGAGATCTGCGCGAGCGCGGTGACAGCGCTGTACTACGACCCCGAGAGAGAC 1633  
Db 2648 AGAAGCGAGAGATCTGCGCGAGCGCGGTGACAGCGCTGTACTACGACCCCGAGAGAGAC 2707  
QY 1634 TGTGCGCGAGATTCAGAGAGAGGCGACGACCAAGTGAACCTTACAGATCTACAGAGAC 1693  
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QY 1694 CTTCAAGAACCTGAAGACCGGCAAGTACGCCAAGTGGGCAACCGCGCAACCAAGAG 1753  
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QY 1754 TGAAGAGCTGACCGAGGCGGTGCAAGAGATGCGCATGAGAGCATGTGATCTGGGGCA 1813  
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QY 1814 AGAAGGCGGAGTTCGCGCTGCGCCATTCAGAGAGAGAGCTTGGAGAGCTTGGTGAACCT 1873  
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QY 1874 ACTGGAGGCGACCTGAGATCCCGGAGTGGGAGCTTGTGAACACCCCGCGGTGAAGC 1933  
Db 2948 ACTGGAGGCGACCTGAGATCCCGGAGTGGGAGCTTGTGAACACCCCGCGGTGAAGC 3007  
QY 1934 TGTGTACCAAGTGAAGAGAGAGCCCATCATCGGCGCGAGACCTTCTACGTGAGAGCG 1993  
Db 3008 TGTGTACCAAGTGAAGAGAGAGCCCATCATCGGCGCGAGACCTTCTACGTGAGAGCG 3067  
QY 1994 CCGCGAACCGCGAGAGCCAGAGATCGGCGAGGCGGCTAGGTGAACCGACCGGCGCGAG 2053  
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QY 2114 CCTGAGAGAGAGCGGAGCGAGAGTGAACATCGTGAACGAGACCGATCGGCTGGGCA 2173  
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QY 2174 TCATCAAGGCGGAGCGGCGGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2233  
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Db 3308 TGAATGAAGAGAGAGAGTGTACTGAGGTGGGTGCGCGCGCAAGGAGCATCGGCGGCA 3367  
QY 2294 ACAGAGCATGACCAAGCTGTGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2353  
Db 3368 ACAGAGCATGACCAAGCTGTGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3427  
QY 2354 TGAATGGGAGAGATCGTGTACTACAGTACATGAGAGAGAGAGAGAGAGAGAGAGAG 2413  
Db 3428 TGAATGGGAGAGATCGTGTACTACAGTACATGAGAGAGAGAGAGAGAGAGAGAGAG 3487





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QY 1675 TACCAGATCTACCGAGAGCCCTTCAAGAACTTGAAAGACCGGCAAGTACGCCAAGATGCGC 1734
Db 1681 TACCAGATCTACCGAGAGCCCTTCAAGAACTTGAAAGACCGGCAAGTACGCCAAGATGCGC 1740
QY 1735 ACCGCCCAACCAACGAGCTGTAAGAGAGTGAACCGAGGCGCTGCGAAGATGCGCATGGAG 1794
Db 1741 ACCGCCCAACCAACGAGCTGTAAGAGAGTGAACCGAGGCGCTGCGAAGATGCGCATGGAG 1800
QY 1795 AGCATCTGATCTGGGGCAAGACCCCAAGTTCCGCTGCGCATCCCAAGAGAGACCTGG 1854
Db 1801 AGCATCTGATCTGGGGCAAGACCCCAAGTTCCGCTGCGCATCCCAAGAGAGACCTGG 1860
QY 1855 GAGACTGTGTGAGCCGACTACTGTGACAGCCCACTTGATCCCGAGTGGAGTTGCTGTAAC 1914
Db 1861 GAGACTGTGTGAGCCGACTACTGTGACAGCCCACTTGATCCCGAGTGGAGTTGCTGTAAC 1920
QY 1915 ACCCCCCCTGTGTGAGAGCTGTGTGTAACAGTGTGAAAGAGAGGCCATCATTCGGGCGCGAG 1974
Db 1921 ACCCCCCCTGTGTGAGAGCTGTGTGTAACAGTGTGAAAGAGAGGCCATCATTCGGGCGCGAG 1980
QY 1975 ACCTTACGTGTGACGCGCGCGCCCAACCGGAGACCAAGATCCGCAAGCGGCTACGTG 2034
Db 1981 ACCTTACGTGTGACGCGCGCGCCCAACCGGAGACCAAGATCCGCAAGCGGCTACGTG 2040
QY 2035 ACCGACCGGGCGCGCGCAAGAGTGTGTGAGCTTGAACCGAGACCAACCAAGAGACCGAG 2094
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QY 2095 CTGCGAGGCAATCCAGCTGTGCGCTGTGACAGCGCGCAAGAGTGTGAACTGTGTGACCGAC 2154
Db 2101 CTGCGAGGCAATCCAGCTGTGCGCTGTGACAGCGCGCAAGAGTGTGAACTGTGTGACCGAC 2160
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QY 2215 AACCAATCATTCGAGCAGCTGATCAAGAGAGAGTGTGTACTGTGAGCTGTGATGCGGCC 2274
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RESULT 9
US-10-190-435-14
; Sequence 14, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEDEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190.435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; LENGTH: 3537
; TYPE: DNA

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; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutAct_C
US-10-190-435-14

Query Match      97.8%; Score 2402.8; DB 12; Length 3537;
Best Local Similarity 99.1%; Pred. No. 0;
Matches 2416; Conservative 0; Mismatches 22; Indels 0; Gaps 0;

QY 14 TGCCCGAGGCGCATGAGCCAGGCCACCAAGGCCAATCTGTATGACCGGCAACTTCA 73
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QY 254 AGGCGCGGAGTCTCCCAAGCAGAGCAGAACCGCGCCCAAGGCCCAAGCGCGGAGCTGC 313
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Db 1394 AGGTGTGCGGCGCAACCCCGCAGGAGGCGCGCCGAGCGCCAGGGCACTCTGAAT 1453
QY 374 TCCCGCAATCAACCTGTGTGTGAGAGGCGCCCTGTGTGAGCATCAAGTGTGCGGCAATCA 433
Db 1454 TCCCGCAATCAACCTGTGTGTGAGAGGCGCCCTGTGTGAGCATCAAGTGTGCGGCAATCA 1513
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QY 494 GCAATGTGAAGCCCAAGATGTGTGTGTGCGGCGATGCGGCTTCAATCAAGTGTGCGCAATG 553
Db 1574 GCAATGTGAAGCCCAAGATGTGTGTGTGCGGCGATGCGGCTTCAATCAAGTGTGCGCAATG 1633
QY 554 ACCAGATCTGTGTGAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 613
Db 1634 ACCAGATCTGTGTGAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1693
QY 614 CCCCCGTGAACATCATTCGCGCCCAACATCTGACCAAGCTGTGTGTGTGTGTGTGTGTGTGT 673
Db 1694 CCCCCGTGAACATCATTCGCGCCCAACATCTGACCAAGCTGTGTGTGTGTGTGTGTGTGTGT 1753
QY 674 CCATACGCCCATTCGAGACCGTGTGCGGTGAAGCTGAAGCCCGGAGATGAGCGGCCCAAG 733
Db 1754 CCATACGCCCATTCGAGACCGTGTGCGGTGAAGCTGAAGCCCGGAGATGAGCGGCCCAAG 1813
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Db 1874 TGAAGAGAGGCGCAAGATCAACCAAGATGCGCCCGAGAGACCCCTTACAACACCCCGGTGT 1933
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QY 914 ACAAGCGACCCAGAGACTTCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 973
Db 1994 ACAAGCGACCCAGAGACTTCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2053

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Db	3134	AGATCGTGAACCTGACCGAGACCAACCAACAGAAAGCCGAGTGCAGGCCATCCAGCTGG	3193
Qy	2114	CCCTGCAGGACAGGGCAGCGAGGTGAACATCTGTACCGACAGCAGTACGCCCTGGGCA	2173
Db	3194	CCCTGCAGGACAGCGCAGCGAGGTGAACATCTGTACCGACAGCAGTACGCCCTGGGCA	3253
Qy	2174	TCATCCAGGCCCCAGCCCCGACAAGAGCGAGAGCTGGTGAACACAGATCATTCGAGCAGC	2233
Db	3254	TCATCCAGGCCCCAGCCCCGACAAGAGCGAGAGCTGGTGAACACAGATCATTCGAGCAGC	3313
Qy	2234	TGATCAAGAAGAGAGAGGTGTACTAGCTGGGTGCCGCCCAAGAGGGCATTCGGCGGCA	2293
Db	3314	TGATCAAGAAGAGAGAGGTGTACTAGCTGGGTGCCGCCCAAGAGGGCATTCGGCGGCA	3373
Qy	2294	ACGAGCAGATTCGACAAAGCTGGTCAGCAAGGGCATCCGCAAGGTGCTGTTCTCTGACGGCA	2353
Db	3374	ACGAGCAGATTCGACAAAGCTGGTCAGCAAGGGCATCCGCAAGGTGCTGTTCTCTGACGGCA	3433
Qy	2354	TCGATGGCGCATCGTGATCTACCACTACATGACGACCTGTACGTGGGAGCGGGGGCC	2413
Db	3434	TCGATGGCGCATCGTGATCTACCACTACATGACGACCTGTACGTGGGAGCGGGGGCC	3493
Qy	2414	CTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT	2451
Db	3494	CTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT	3531
RESULT 10			
US-10-190-435-15			
; Sequence 15; Application US/10190435			
; Publication No. US20030143248A1			
; GENERAL INFORMATION:			
; APPLICANT: ZUR MEGEDE, Jan			
; APPLICANT: BARNETT, Susan W.			
; APPLICANT: LIAN, Ying			
; APPLICANT: ENGELBRECHT, Susan			
; APPLICANT: VAN RENSBURG, Estrelita J.			
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C			
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF			
; FILE REFERENCE: PP18133.003 / 2302-18133			
; CURRENT APPLICATION NUMBER: US/10/190,435			
; CURRENT FILING DATE: 2002-12-30			
; NUMBER OF SEQ ID NOS: 319			
; SOFTWARE: PatentIn Ver. 2.0			
; SEQ ID NO 15			
; LENGTH: 3537			
; TYPE: DNA			
; ORGANISM: Artificial Sequence			
; FEATURE:			
; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutIna_C			
US-10-190-435-15			
Query Match 97.8%; Score 2402.8; DB 12; Length 3537;			
Best Local Similarity 99.1%; Pred. No. 0;			
Matches 2416; Conservative 0; Mismatches 22; Indels 0; Gaps 0;			
Qy	14	TGSCCGAGCGCATGACCGCAGGCCACGAGGCCAAATCTCTGATGCGCGCAGCACTTCA	73
Db	1094	TGSCCGAGCGCATGACCGCAGGCCAACACCGAGCGTGATGATGCAAGAGCAACTTTAA	1153
Qy	74	AGGGCCCCAAGCGCATCATCAAGTGTCTTCAATCTGGCGCAAGAGGGCCACATCGCCGCA	133
Db	1154	AGGGCCCCAAGCGCATCATCAAGTGTCTTCAATCTGGCGCAAGAGGGCCACATCGCCGCA	1213
Qy	134	ACTGCGCGCCCCCGCCAAAGAAAGGCGTGTGGAAGTTCGCGCAAGGAGGGCCACCATGA	193
Db	1214	ACTGCGCGCCCCCGCCAAAGAAAGGCGTGTGGAAGTTCGCGCAAGGAGGGCCACCATGA	1273
Qy	194	AGGACTGCACCGAGCGCCAGGCCAACTTCTTCGCGAGCACTGGCTTCCCGCAGGGCA	253
Db	1274	AGGACTGCACCGAGCGCCAGGCCAACTTCTTCGCGAGCACTGGCTTCCCGCAGGGCA	1333

QY 254 AGGCCCGGAGTTCCCGAGCGAGAGAACCGCGCCAAACAGCCCAAGCCCGAGAGCTGC 313  
DB 1334 AGGCCCGGAGTTCCCGAGCGAGAGAACCGCGCCAAACAGCCCAAGCCCGAGAGCTGC 1393  
QY 314 AGGTGCGGCGGACCAACCCCGGAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373  
DB 1394 AGGTGCGGCGGACCAACCCCGGAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1453  
QY 374 TCCCGCGAGATCAACCTTGGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 433  
DB 1454 TCCCGCGAGATCAACCTTGGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1513  
QY 434 AGGAGCGCGCTGCTGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 493  
DB 1514 AGGAGCGCGCTGCTGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1573  
QY 494 GCAAGTGGAAAGCCCAAGATGATCGGCGCGCATCGGCGCGCTTATCAAGGTGCGCGAGTA 553  
DB 1574 GCAAGTGGAAAGCCCAAGATGATCGGCGCGCATCGGCGCGCTTATCAAGGTGCGCGAGTA 1633  
QY 554 ACCAGATCTGATCGAGATCTGCGGCGAGAAAGCCATCGGCAACCGTGTGATCGGCGCG 613  
DB 1634 ACCAGATCTGATCGAGATCTGCGGCGAGAAAGCCATCGGCAACCGTGTGATCGGCGCG 1693  
QY 614 CCCCCTGGAACATCATCGGCGCGCAACATGCTGACCGAGCTGAGCTGCAACCTGAACTTC 673  
DB 1694 CCCCCTGGAACATCATCGGCGCGCAACATGCTGACCGAGCTGAGCTGCAACCTGAACTTC 1753  
QY 674 CCATCAAGCCCATGAGACCGTGTGCGGAGCTGGAAGCCCGGATGAGAGGCGCGCGCAAG 733  
DB 1754 CCATCAAGCCCATGAGACCGTGTGCGGAGCTGGAAGCCCGGATGAGAGGCGCGCGCAAG 1813  
QY 734 TGAAGCAGTGGCCCTGAGACCGAGAGAGAAATCAAGGCGCTGACCGCATCTGCGAGAGA 793  
DB 1814 TGAAGCAGTGGCCCTGAGACCGAGAGAGAAATCAAGGCGCTGACCGCATCTGCGAGAGA 1873  
QY 794 TGGAGAAAGAGGCGCAAGATCAACAAATCGGCGCGCGCGCGCGCGCGCGCGCGCGTGT 853  
DB 1874 TGGAGAAAGAGGCGCAAGATCAACAAATCGGCGCGCGCGCGCGCGCGCGCGCGCGTGT 1933  
QY 854 TCGGCATCAAGAAAGTA 913  
DB 1934 TCGGCATCAAGAAAGTA 1993  
QY 914 ACAAGCCACCCAGAGACTTCTGAGAGGTGAGCTGAGGCGATCCCGACCGCGCGCGCTGA 973  
DB 1994 ACAAGCCACCCAGAGACTTCTGAGAGGTGAGCTGAGGCGATCCCGACCGCGCGCGCTGA 2053  
QY 974 AGAAGAAAGAGAGCGTGAACGCTGAGAGCTGAGAGCGCTGACTTCAAGCGTGCCTTGG 1033  
DB 2054 AGAAGAAAGAGAGCGTGAACGCTGAGAGCTGAGAGCGCTGACTTCAAGCGTGCCTTGG 2113  
QY 1034 ACCAGAGCTTCCGCAATACACCGCTTCAACATCCCGAGATCAACAGAGAGAGAGAGAG 1093  
DB 2114 ACCAGAGCTTCCGCAATACACCGCTTCAACATCCCGAGATCAACAGAGAGAGAGAGAG 2173  
QY 1094 GCATCCGCTACAGTACAAAGTGTGCGCGCGAGGCTGAGAGAGAGAGAGAGAGAGAGTA 1153  
DB 2174 GCATCCGCTACAGTACAAAGTGTGCGCGCGAGGCTGAGAGAGAGAGAGAGAGAGAGTA 2233  
QY 1154 AGAGCAGATGACCAAGATCTTGGAGCGCTTCCGCGCGCGCAACCCCGAGATCTGATCT 1213  
DB 2234 AGAGCAGATGACCAAGATCTTGGAGCGCTTCCGCGCGCGCAACCCCGAGATCTGATCT 2293  
QY 1214 ACCAGAGCGCGCGCTGAGTA 1273  
DB 2294 ACCAGAGCGCGCGCTGAGTA 2353  
QY 1274 AGGAGCTGCGCAAGACCTGCTGCGCTGAGGCGCTTCAACACCGCGCGCAAGAGAGAGAG 1333  
DB 2354 AGGAGCTGCGCAAGACCTGCTGCGCTGAGGCGCTTCAACACCGCGCGCAAGAGAGAGAG 2413  
QY 1334 AGGAGCGCGCGCTTCTGCGCATGAGCTGACCCCGCAAGTGAACCGTGTGAGCGCTTGC 1393

DB 2414 AGGAGCGCGCGCTTCTGCGCATGAGCTGACCCCGCAAGTGAACCGTGTGAGCGCTTGC 2473  
QY 1394 AGCTGCCCGAGAGAGAGAGTGAACCTGTGAACATCAAGAACTGTGTGGCAAGCTGA 1453  
DB 2474 AGCTGCCCGAGAGAGAGAGTGAACCTGTGAACATCAAGAACTGTGTGGCAAGCTGA 2533  
QY 1454 ACTGGGCGAGCGAGATCTACCCCGGATCAAGGTGTGGCGAGAGTGTCAAGCTGTGCGG 1513  
DB 2534 ACTGGGCGAGCGAGATCTACCCCGGATCAAGGTGTGGCGAGAGTGTGTCAAGCTGTGCGG 2593  
QY 1514 GCGCCAAAGCGCTGACCGACATGCTGCGCTTGAACCGAGAGAGCGCGAGCTGAGAGCTG 1573  
DB 2594 GCGCCAAAGCGCTGACCGACATGCTGCGCTTGAACCGAGAGAGCGCGAGCTGAGAGCTG 2653  
QY 1574 AGAACCAGAGATCTTCCGCGAGACCGCTGTGACGCGCTGTACTAGAACCCCAAGAGACC 1633  
DB 2654 AGAACCAGAGATCTTCCGCGAGACCGCTGTGACGCGCTGTACTAGAACCCCAAGAGACC 2713  
QY 1634 TGGTGGCCGAGATCCAGAAAGAGAGGCGACGACAGTGGACCTTCAAGATCTTACAGAGG 1693  
DB 2714 TGGTGGCCGAGATCCAGAAAGAGAGGCGACGACAGTGGACCTTCAAGATCTTACAGAGG 2773  
QY 1694 CTTTCAAGAACTTGAAGACCGGCAAGTACGCGCAAGATGCGCACCGGCCAACCAAGACG 1753  
DB 2774 CTTTCAAGAACTTGAAGACCGGCAAGTACGCGCAAGATGCGCACCGGCCAACCAAGACG 2833  
QY 1754 TGAAGAGCTGACCGAGGCGGCGGAGAGAGATGCGCGTGAAGAGACCTGTGATCTGAGGCA 1813  
DB 2834 TGAAGAGCTGACCGAGGCGGCGGAGAGAGATGCGCGTGAAGAGACCTGTGATCTGAGGCA 2893  
QY 1814 AGACCCCGCAAGTTCCGCTGCGCATCAGAAAGAGAGCTGAGAGAGCTGTGAGAGAGACT 1873  
DB 2894 AGACCCCGCAAGTTCCGCTGCGCATCAGAAAGAGAGCTGTGAGAGAGCTGTGAGAGAGACT 2953  
QY 1874 ACTGGAGGCGACCTGTGATCCCGAGTGGAGTTCGTGAACACCCCGCTGTGTGAAGC 1933  
DB 2954 ACTGGAGGCGACCTGTGATCCCGAGTGGAGTTCGTGAACACCCCGCTGTGTGAAGC 3013  
QY 1934 TGTGATCAAGAGCTGAGTA 1993  
DB 3014 TGTGATCAAGAGCTGAGTA 3073  
QY 1994 CCGCCAAACCGCGAGACCAAGATGAGCAAGCGCGCTTCAAGAGAGAGAGAGAGAGAGAGTA 2053  
DB 3074 CCGCCAAACCGCGAGACCAAGATGAGCAAGCGCGCTTCAAGAGAGAGAGAGAGAGAGAGTA 3133  
QY 2054 AGATCGTGAAGCTGAGTA 3193  
DB 3134 AGATCGTGAAGCTGAGTA 3253  
QY 2114 CCGTGAAGAGAGCGGCGAGTA 2173  
DB 3194 CCGTGAAGAGAGCGGCGAGTA 3253  
QY 2174 TCATCCAGGCGCGAGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTA 2233  
DB 3254 TCATCCAGGCGCGAGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTA 3313  
QY 2234 TGAATCAAGTA 2293  
DB 3314 TGAATCAAGTA 3373  
QY 2294 ACCAGAGATGAGCAAGCTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTA 2353  
DB 3374 ACCAGAGATGAGCAAGCTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTA 3413  
QY 2354 TCGATGCGCGCATCTGTGATCTACAGTACATGAGACAGCTTGAAGTGTGTGAGAGAGAG 2413  
DB 3434 TCGATGCGCGCATCTGTGATCTACAGTACATGAGACAGCTTGAAGTGTGTGAGAGAGAG 3493  
QY 2414 CTAGATCTGATTTAAAGCTTCCCGGAGCTTACAGAGCGGT 2451

Db 3494 CTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 3531

## RESULT 11

US-10-190-435-12

; Sequence 12, Application US/10190435

; Publication No. US20030143248A1

; GENERAL INFORMATION:

; APPLICANT: ZUR WEGEDE, Jan

; APPLICANT: BARNETT, Susan W.

; APPLICANT: LIAN, Ying

; APPLICANT: ENGELBRECHT, Susan

; APPLICANT: VAN RENSBURG, Estrelita J.

; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C

; FILE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF

; FILE REFERENCE: P18133.003 / 2302-18133

; CURRENT APPLICATION NUMBER: US/10/190,435

; CURRENT FILING DATE: 2002-12-30

; NUMBER OF SEQ ID NOS: 319

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 12

; LENGTH: 5145

; TYPE: DNA

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: Description of Artificial Sequence:

; OTHER INFORMATION: GagcompPolmutInatRevNef\_C

US-10-190-435-12

Query Match 97.8%; Score 2401.8; DB 12; Length 5145;  
Best Local Similarity 99.9%; Pred. No. 0;  
Matches 2403; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY	14	TGCGGAGGCCATGAGCCAGGCGACAGCGCCAAACATCTGATGAGCGAGCAACTTCA	73
Db	1487	TGCGGAGGCCATGAGCCAGGCGACAGCGCCAAACATCTGATGAGCGAGCAACTTCA	1546
QY	74	AGGGCCCCAAGCGCATCATCAAGTCTTCACTGGGCGAAGGAGGCGCACATCGGCCGCA	133
Db	1547	AGGGCCCCAAGCGCATCATCAAGTCTTCACTGGGCGAAGGAGGCGCACATCGGCCGCA	1606
QY	134	ACTGCCGCCGCCCGCAAGAGGGCTGCTGAAAGTGGCGCAAGGAGGCCACCAAGATGA	193
Db	1607	ACTGCCGCCGCCCGCAAGAGGGCTGCTGAAAGTGGCGCAAGGAGGCCACCAAGATGA	1666
QY	194	AGGACTGCAACGAGCCAGCGCCAACTTCTTCGGGAGGACCTGGCTTCCCGCAGGCA	253
Db	1667	AGGACTGCAACGAGCCAGCGCCAACTTCTTCGGGAGGACCTGGCTTCCCGCAGGCA	1726
QY	254	AGGCCCGCGAGTTTCCCGCAGCGAGCAAGCCGGCGCAACAGCCCGCCAGCGCGAGCTGC	313
Db	1727	AGGCCCGCGAGTTTCCCGCAGCGAGCAAGCCGGCGCAACAGCCCGCCAGCGCGAGCTGC	1786
QY	314	AGGTGCGCGCGAGCAACCCCGCAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG	373
Db	1787	AGGTGCGCGCGCGCAACCCCGCAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG	1846
QY	374	TCCCCCAGATCACCTGTGCGAGCGCCCTTGGTGAAGATCAAGTGGCGCGCGAGATCA	433
Db	1847	TCCCCCAGATCACCTGTGCGAGCGCCCTTGGTGAAGATCAAGTGGCGCGCGAGATCA	1906
QY	434	AGGAGGCCCTGTGGGCAACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG	493
Db	1907	AGGAGGCCCTGTGGGCAACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG	1966
QY	494	GCAAGTGAAGCCCAAGATGATCGCGGCAATCGGCGGCTTCAAGTGGCGCGCGAGTAG	553
Db	1967	GCAAGTGAAGCCCAAGATGATCGGCGGCAATCGGCGGCTTCAAGTGGCGCGCGAGTAG	2026
QY	554	ACCAGATCCTGATCGAGATCTGGGCGAAGAGGCCATCGGCGGCTGCTGATCGGCGCGCA	613
Db	2027	ACCAGATCCTGATCGAGATCTGGGCGAAGAGGCCATCGGCGGCTGCTGATCGGCGCGCA	2086

QY	614	CCCCCTGAACATCATCTGCGCCGCAACATGCTGACCCAGCTGGGCTGCACCCCTGAACCTTCC	673
Db	2087	CCCCCTGAACATCATCTGCGCCGCAACATGCTGACCCAGCTGGGCTGCACCCCTGAACCTTCC	2146
QY	674	CCATCAGCCCCCATCGAGACCGTGCCTGAAGCTGAAGCCCGGCGCATGAGCGGCCCAAGG	733
Db	2147	CCATCAGCCCCCATCGAGACCGTGCCTGAAGCTGAAGCCCGGCGCATGAGCGGCCCAAGG	2206
QY	734	TGAAGCAGTGGCCCTTGACCGGAGGAGAGATCAAGGCCCTGACCCGCTATCTCGAGGAGA	793
Db	2207	TGAAGCAGTGGCCCTTGACCGGAGGAGAGATCAAGGCCCTGACCCGCTATCTCGAGGAGA	2266
QY	794	TGAGAGAGGAGGAGAGATCAACAGATCGGCGCGCGAGAACCCCTACACACACCCCGTGT	853
Db	2267	TGAGAGAGGAGGAGAGATCAACAGATCGGCGCGCGAGAACCCCTACACACACCCCGTGT	2326
QY	854	TCGCCATCAAGAGAGGAGGAGCAGCACAGTGGCGCAAGCTGGTGAAGTTCGCGGAGCTGA	913
Db	2327	TCGCCATCAAGAGAGGAGGAGCAGCACAGTGGCGCAAGCTGGTGAAGTTCGCGGAGCTGA	2386
QY	914	ACAGCGCACCCAGGACTTCTGGGAGGTGACGTGGGAGTATCCCCCACCCCGCGGCTGA	973
Db	2387	ACAGCGCACCCAGGACTTCTGGGAGGTGACGTGGGAGTATCCCCCACCCCGCGGCTGA	2446
QY	974	AGAAGAGAGAGGAGCGTGCCTGCTGGAGCTGGCGAGCGCTTCTACGCTGCCCTCG	1033
Db	2447	AGAAGAGAGAGGAGCGTGCCTGCTGGAGCTGGCGAGCGCTTCTACGCTGCCCTCG	2506
QY	1034	ACGAGGACTTCCGCAAGTACACCGCTTCCACCATCCCCAGCATCAACACGAGAGACCCCG	1093
Db	2507	ACGAGGACTTCCGCAAGTACACCGCTTCCACCATCCCCAGCATCAACACGAGAGACCCCG	2566
QY	1094	GCATCCGCTACAGTACAGAGTCTGCCCGCAGGCTGGAGGCGGAGCCCGCAGCTTCTCC	1153
Db	2567	GCATCCGCTACAGTACAGAGTCTGCCCGCAGGCTGGAGGCGGAGCCCGCAGCTTCTCC	2626
QY	1154	AGAGCAGCATGACCAAGATCTTGGAGCCCTTCCGCGCCCGCAACCCCGAGAGTCTGATCT	1213
Db	2627	AGAGCAGCATGACCAAGATCTTGGAGCCCTTCCGCGCCCGCAACCCCGAGAGTCTGATCT	2686
QY	1214	ACCAGGCCCTCTGATGCTGGGAGGAGCTGGAGATCGGCGAGGACCGCGCGCAAGATCG	1273
Db	2687	ACCAGGCCCTCTGATGCTGGGAGGAGCTGGAGATCGGCGAGGACCGCGCGCAAGATCG	2746
QY	1274	AGGAGCTGCGCAAGCACCTGCTGCGCTGGGGCTTCCACCCCGCGCAAGAGACACAGA	1333
Db	2747	AGGAGCTGCGCAAGCACCTGCTGCGCTGGGGCTTCCACCCCGCGCAAGAGACACAGA	2806
QY	1334	AGGAGGCCCTTCTTCTGCGCATCGAGTGCACCCCGCAAGTGGACCGTGCAGCCCATCG	1393
Db	2807	AGGAGGCCCTTCTTCTGCGCATCGAGTGCACCCCGCAAGTGGACCGTGCAGCCCATCG	2866
QY	1394	AGTGTCCGAGAGGAGAGCTGACCGTGAACGACATCCAGAGCTGGTGGGCAAGCTGA	1453
Db	2867	AGTGTCCGAGAGGAGAGCTGACCGTGAACGACATCCAGAGCTGGTGGGCAAGCTGA	2926
QY	1454	ACTGGGCCAGCCAGATCTTACCCCGCATCAAGGTGCGCAGCTGTGCAAGTCTCTCGCG	1513
Db	2927	ACTGGGCCAGCCAGATCTTACCCCGCATCAAGGTGCGCAGCTGTGCAAGTCTCTCGCG	2986
QY	1514	GGCCAAAGGCCCTGACCGACATCGTGCCTGACCCGAGGAGGCGGAGCTGGAGCTGGCG	1573
Db	2987	GGCCAAAGGCCCTGACCGACATCGTGCCTGACCCGAGGAGGCGGAGCTGGAGCTGGCG	3046
QY	1574	AGAACCGCGAGATCTTCCGCGAGCCGCTGCACCGCTGTACTACGACCCCGCAGCAAGACC	1633
Db	3047	AGAACCGCGAGATCTTCCGCGAGCCGCTGCACCGCTGTACTACGACCCCGCAGCAAGACC	3106
QY	1634	TGTTGGCCGAGATCCAGAGAGGAGGCGCACGACAGTGGACCTTACAGATCTTACAGGAGC	1693
Db	3107	TGTTGGCCGAGATCCAGAGAGGAGGCGCACGACAGTGGACCTTACAGATCTTACAGGAGC	3166
QY	1694	CTTTCAGAACCTTGAAGACCGGCAAGTACGCCAAGATGGCCACCGCCACCAACGAGC	1753



Db	2041	CGGGCCGGCAGAGATCTGTAGCCTTGACCGAGACCAACCAAGAGACCGAGCTGCAG	2100
Qy	2101	GCATCAGCTGCCCTGCAGGACAGCGGACGAGGTGAACATCTGTACCGACAGCCAG	2160
Db	2101	GCATCAGCTGCCCTGCAGGACAGCGGACGAGGTGAACATCTGTACCGACAGCCAG	2160
Qy	2161	TAGCCCTGGGCATCATCCAGGCCCCAGCCGACAAGAGCGAGCGAGCTGGTGAACCA	2220
Db	2161	TAGCCCTGGGCATCATCCAGGCCCCAGCCGACAAGAGCGAGCGAGCTGGTGAACCA	2220
Qy	2221	ATCATGAGCAGCTGATCAAGAGAGAGAGGTGTACTGTAGCTGGGTGCGCGCCCAAG	2280
Db	2221	ATCATGAGCAGCTGATCAAGAGAGAGAGGTGTACTGTAGCTGGGTGCGCGCCCAAG	2280
Qy	2281	GGCATGGCGGCAACGAGCAGATCGCAAGCTGGTGAGCAAGGGCATCCCGAAGGTGCTG	2340
Db	2281	GGCATGGCGGCAACGAGCAGATCGCAAGCTGGTGAGCAAGGGCATCCCGAAGGTGCTG	2340
Qy	2341	TTCTGTGACGGCATCGATGGCGGCATCGTGATCTACAGTACATGGACGACCTGTAGCTG	2400
Db	2341	GAATTGAGCCCTGGAGCCCACTGGAGCCCTGGAAACACCCCGGACCGACCCCAAG	2400
Qy	2401	GGCAGCGGC	2409
Db	2401	ACCGCGGC	2409
RESULT 13			
US-10-190-435-46			
; Sequence 46, Application US/10190435			
; Publication No. US20030143248A1			
; GENERAL INFORMATION:			
; APPLICANT: ZUR MEGEDE, Jan			
; APPLICANT: BARNETT, Susan W.			
; APPLICANT: LIAN, Ying			
; APPLICANT: ENGELERCHT, Susan			
; APPLICANT: VAN RENSBURG, Estrelita J.			
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGNIC HIV TYPE C			
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF			
; FILE REFERENCE: EP18133.003 / 2302-18133			
; CURRENT APPLICATION NUMBER: US/10/190,435			
; CURRENT FILING DATE: 2002-12-30			
; NUMBER OF SEQ ID NOS: 319			
; SOFTWARE: PatentIn Ver. 2.0			
; SEQ ID NO 46			
; LENGTH: 3597			
; TYPE: DNA			
; ORGANISM: Artificial Sequence			
; FEATURE:			
; OTHER INFORMATION: Description of Artificial Sequence: p2PolTatRevNef opt C			
US-10-190-435-46			
Query Match 94.8%; Score 2325.2; DB 12; Length 3597;			
Best Local Similarity 99.7%; Pred. No. 0;			
Matches 2330; Conservative 0; Mismatches 8; Indels 0; Gaps 0;			
Qy	4	GAGCGCCACCATGCCGAGGCCATGACCGAGGCCACAGCGCCACATCTGTATGCAGCGC	63
Db	1258	GACTGCGAATGCCGAGGCCATGAGCCAGGCCACAGCGCCCAACATCTGTATGCAGCGC	1317
Qy	64	AGCAACTTCAAGGGCCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCAAGAGGGCCAC	123
Db	1318	AGCAACTTCAAGGGCCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCAAGAGGGCCAC	1377
Qy	124	ATGCGCCGAATGCGCGCCCCCGCAAGAGAGGGTGTGGAAGTGCAGGAGGGGC	183
Db	1378	ATGCGCCGAATGCGCGCCCCCGCAAGAGAGGGTGTGGAAGTGCAGGAGGGGC	1437
Qy	184	CACCAGATGAAGACTGACCGAGCGCCAGGCAACTTCTTCGGGAGAGACCTGGCCTTC	243
Db	1438	CACCAGATGAAGACTGACCGAGCGCCAGGCAACTTCTTCGGGAGAGACCTGGCCTTC	1497
Qy	244	CCCGAGGGCAAGCGCGCGAGTTTCCCGACGAGCAGAAACCGCGCCAAACAGCCCCCAGC	303

Db 1498 CCCCAGGGCAAGGCCCCGGAGTTCCCAAGCGAGCAAGCCGGCCAAAGCCCCCAAGCCAGC 1557  
 Qy 304 CGCGAGCTGCAAGGTGCGGGGCGACAACCCCGCAACGAGGCGCGGCGCCAGCCAGCGCC 363  
 Db 1558 CGGAGCTGCAAGGTGCGGGGCGACAACCCCGCAACGAGGCGCGGCGCCAGCGCCAGCGCC 1617  
 Qy 364 ACCCTGAACCTTCCCCAGATCAACCTGTGGACGCGCCCTGTGTAGCATCAAGGTGGC 423  
 Db 1618 ACCCTGAACCTTCCCCAGATCAACCTGTGGACGCGCCCTGTGTAGCATCAAGGTGGC 1677  
 Qy 424 GCGCAGATCAAGAGGCTTCTGTGAACAACCGGCGCGACAACACCTGTGTAGAGAGATG 483  
 Db 1678 GCGCAGATCAAGAGGCTTCTGTGAACAACCGGCGCGACAACACCTGTGTAGAGAGATG 1737  
 Qy 484 AGCTGCGCGCGCAAGTGGAGAGCCCAAGATGATCGGCGCGCATCGCGGCTTATCAAGATG 543  
 Db 1738 AGCTGCGCGCGCAAGTGGAGAGCCCAAGATGATCGGCGCGCATCGCGGCTTATCAAGATG 1797  
 Qy 544 CGCAGATCAAGATCTGTATCGAGATCTGCGGCAAGAGGCGCATCGGACCGTGTG 603  
 Db 1798 CGCAGATCAAGATCTGTATCGAGATCTGCGGCAAGAGGCGCATCGGACCGTGTG 1857  
 Qy 604 ATGCGCGCGCAACCCCGTGAACATATGCGCGCGCAATGCTGACCCAGCTGTGGCTGCAAC 663  
 Db 1858 ATGCGCGCGCAACCCCGTGAACATATGCGCGCGCAATGCTGACCCAGCTGTGGCTGCAAC 1917  
 Qy 664 CTGAACCTTCCCATCAGCCCATCAGACCGTGCCTGTGAAGTGAAGCCCGCATGAG 723  
 Db 1918 CTGAACCTTCCCATCAGCCCATCAGACCGTGCCTGTGAAGTGAAGCCCGCATGAG 1977  
 Qy 724 GCGCGCGCAAGTGAAGCACTGTGCCCCCTTACCGAGAGAAAGATCAAGCCCTGACCGCATC 783  
 Db 1978 GCGCGCGCAAGTGAAGCACTGTGCCCCCTTACCGAGAGAAAGATCAAGCCCTGACCGCATC 2037  
 Qy 784 TGGAGAGAGATGAGAGAGAGAGGAGATCAACCAAGATCGGCGCGCAAGCCCTTAC 843  
 Db 2038 TGGAGAGAGATGAGAGAGAGAGGAGATCAACCAAGATCGGCGCGCAAGCCCTTAC 2097  
 Qy 844 ACCCGCGTGTTCGCATCAAG 903  
 Db 2098 ACCCGCGTGTTCGCATCAAG 2157  
 Qy 904 CGGAGCTGAACAAGCGCACCCAGAGCTTGTGGAGGTGCAAGTGTGGCATCCCCACCC 963  
 Db 2158 CGGAGCTGAACAAGCGCACCCAGAGCTTGTGGAGGTGCAAGTGTGGCATCCCCACCC 2217  
 Qy 964 GCGGCGCTGAAG 1023  
 Db 2218 GCGGCGCTGAAG 2277  
 Qy 1024 GTGCGCGTGAAG 1083  
 Db 2278 GTGCGCGTGAAG 2337  
 Qy 1084 GAGAGCGCGCGCATCCGCTACAGTACAGAGTGTGCTGCGGAGGTGAAGAGAGAGAGAGAG 1143  
 Db 2338 GAGAGCGCGCGCATCCGCTACAGTACAGAGTGTGCTGCGGAGGTGAAGAGAGAGAGAGAG 2297  
 Qy 1144 AGCATCTTCAG 1203  
 Db 2398 AGCATCTTCAG 2457  
 Qy 1204 ATCGTATCTACAG 1263  
 Db 2458 ATCGTATCTACAG 2517  
 Qy 1264 GCGAAGATGAG 1323  
 Db 2518 GCGAAGATGAG 2577  
 Qy 1324 AAGCAGCAG 1383

Db 2578 AAGCAGCAG 2637  
 Qy 1384 CAGCCATCGAGCTGCCCGAAG 1443  
 Db 2638 CAGCCATCGAGCTGCCCGAAG 2697  
 Qy 1444 GCGAAGCTGAAGCTGGGCGAGCGAGATCTACCCCGGATCAAGGTGGCGCCAGCTGTGCAAG 1503  
 Db 2698 GCGAAGCTGAAGCTGGGCGAGCGAGATCTACCCCGGATCAAGGTGGCGCCAGCTGTGCAAG 2757  
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 Qy 1804 ATCTGGGCGAG 1863  
 Db 3058 ATCTGGGCGAG 3117  
 Qy 1864 TGGACCGACTACTGCGAGGCGCACCTTGAGTCCCGAGTGGAGATTCTGTGAACAACCCCGCC 1923  
 Db 3118 TGGACCGACTACTGCGAGGCGCACCTTGAGTCCCGAGTGGAGATTCTGTGAACAACCCCGCC 3177  
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 Db 3238 GTGAGCGGCGCGCAACCGCGAG 3297  
 Qy 2044 GCGCGCGAGAGAGATGTGAGCTTGAACCGAGACCAACCAAGAGAGAGAGAGAGAGAGAGAG 2103  
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 Qy 2104 ATCCAGCTGGCGCTGAG 2163  
 Db 3358 ATCCAGCTGGCGCTGAG 3417  
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 Qy 2224 ATCGAGAGCTGTATCAAG 2283  
 Db 3478 ATCGAGAGCTGTATCAAG 3537  
 Qy 2284 ATCGGCGGCAAG 2341  
 Db 3538 ATCGGCGGCAAG 3595

RESULT 14  
 us-10-190-435-47  
 ; Sequence 47, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEGADE, Jan



```

; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBERG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: PPI8133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn ver. 2.0
; SEQ ID NO 47
; LENGTH: 3624
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: p2PolratRevNef.opt.native_C
; US-10-190-435-47

Query Match      93.4%; Score 2295.8; DB 12; Length 3624;
Best Local Similarity 97.6%; Pred. No. 0;
Matches 2356; Conservative 0; Mismatches 47; Indels 12; Gaps 2;

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QY 67 AACTTCAGGGCCCCAAGCGCATCATCAAGTGTCTTCACTCGGGGAGAGGGGCAATC 126
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DB 121 GCCCGCAACTGCGCGGCCCGCCGCAAGAGGGCTGTGGAGTGGCGCAAGGGGGCCAC 180
QY 187 CAGATGAAGGACTCACCGAGCGCGAGCCAACTTCTTCCGCGAGGACCTGGCCCTCCCC 246
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QY 307 GAGCTGCAGGTGCGCGCGGCAAAACCCCGCAGCGAGCGCGCGCGCGCGCGCGAGCGCAC 366
DB 301 GAGCTGCAGGTGCGCGCGGCAAAACCCCGCAGCGAGCGCGCGCGCGCGCGAGCGCAC 360
QY 367 CTGAATCTCCCGCAGATCACTGTGCGAGCGCCCTGTGTGAGCATCAAGGTGGCGGC 426
DB 361 CTGAATCTCCCGCAGATCACTGTGCGAGCGCCCTGTGTGAGCATCAAGGTGGCGGC 420
QY 427 CAGATCAGAGAGCCCTGTGTGACACCGGCGCGAGACGACGACGACGACGACGACGACGAC 486
DB 421 CAGATCAGAGAGCCCTGTGTGACACCGGCGCGAGACGACGACGACGACGACGACGACGAC 480
QY 487 CTGCGCGGCAAGTGGAGAGCCCAAGATGATCGGGGCGATCGGGGCGCTTCAATCAAGGTGCGC 546
DB 481 CTGCGCGGCAAGTGGAGAGCCCAAGATGATCGGGGCGATCGGGGCGCTTCAATCAAGGTGCGC 540
QY 547 CAGTACGACGATCTGTGATCGAGATCTGCGGCAAGAGGCCATCGGCACCGTGTCTGATC 606
DB 541 CAGTACGACGATCTGTGATCGAGATCTGCGGCAAGAGGCCATCGGCACCGTGTCTGATC 600
QY 607 GGGCCCAACCCCGTGAACATCATCGGCGCGCAACATGTGACCCAGCTGGGCTGACCCCTG 666
DB 601 GGGCCCAACCCCGTGAACATCATCGGCGCGCAACATGTGACCCAGCTGGGCTGACCCCTG 660
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DB 661 AACTTCCCCATACGCCCATCGAGACCGTGCCTGTGAGCTGAAGCCCGCATGTGACGGC 720
QY 727 CCCAAGGTGAAGCTGGGCCCTTGACCGAGGAGAGATCAAGGCCCTTGACCGGCATCTGC 786

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DB 721 CCCAAGGTGAAGCACTGGCCCTTGACCGAGAGAGATCAAGGCCCTTGACCGCATCTGC 780
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DB 781 GAGGAGATGAGAGAGGAGGCAAGATCACCAAGATCGGCCCGGAGAAACCCCTACAACACC 840
QY 847 CCCTGTTCGCCATCAAGAGAGAGGACAGCAACCAAGTGGCGCAAGCTGTGATTCGCG 906
DB 841 CCCTGTTCGCCATCAAGAGAGAGGACAGCAACCAAGTGGCGCAAGCTGTGATTCGCG 900
QY 907 GAGCTGAACAAGCGCACCCAGGACTTCTGGAGGTGAGTGGGATCCCCACCCCGCC 966
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QY 967 GGCCTGAAGAGAGAGAGAGCGTGCACCGTGTGGACGTGGGCGCACGCTTACTTCAGCGTG 1026
DB 961 GGCCTGAAGAGAGAGAGAGCGTGCACCGTGTGGACGTGGGCGCACGCTTACTTCAGCGTG 1020
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DB 1021 CCCTTGACGAGGACTTCCGCAAGTACACCGCTTACCATCCCCAGCATCAACAAGAG 1080
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QY 1207 GTGATCTTACCA-----GGCCCCCTGTGCTGGGCGAGCACTTGGAGATCGGCCAGAC 1260
DB 1201 GTGATCTTACCAAGTACCAAGTGTGGAGCCCTTCCGCGCGCGCAACCCCGAGATC 1260
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DB 1321 AAGAAGCACAGAGAGAGCCCTTCTGCGCCAT-----CGAGTGTGACCCCGCAAG 1380
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DB 1381 TGACCGCTGAGCCCATCGAGCTGCGCGAGAGAGAGCTGGACCTGACGACATCCAG 1440
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DB 1501 CTGTGCAAGCTGCTGCGCGCGCCAAAGGCCCTGACCCGACATCTGTGCGCCCTGACCGAGGAG 1560
QY 1555 GCGAGCTGGAGCTGCGCGAGAACCGCGAGATCTCTGCGAGCCCGCTGACGCGCTGTAC 1614
DB 1561 GCGAGCTGGAGCTGCGCGAGAACCGCGAGATCTCTGCGAGCCCGCTGACGCGCTGTAC 1620
QY 1615 TAGGACCCCGCAGCAAGGACCTGTGGCGGAGATCCAGAAGCAGGGCCACGACAGTGGAGC 1674
DB 1621 TAGGACCCCGCAGCAAGGACCTGTGGCGGAGATCCAGAAGCAGGGCCACGACAGTGGAGC 1680
QY 1675 TACAGATCTACGAGAGCCCTTCAAGAACCTTGAAGACCGGCAAGTACGCCAAGATGCGC 1734
DB 1681 TACAGATCTACGAGAGCCCTTCAAGAACCTTGAAGAACCTTGAAGACCGGCAAGTACGCCAAGATGCGC 1740
QY 1735 ACCGCCCAACCAACGACGTGAAGCTGACCGAGCCCGTGCAGAGATCGCCATGGAG 1794
DB 1741 ACCGCCCAACCAACGACGTGAAGCTGACCGAGCCCGTGCAGAGATCGCCATGGAG 1800
QY 1795 AGCATCTGATCTGGGGCAAGACCCCGAGTTCCCGCTGCCCATCCAGAGGAGACCTGC 1854

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Db 1801 AGCATCTGATCTGGGGCAAGACCCCAAGTTCCGCTCCCATTCAGAGAGACCTGG 1860  
 QY 1855 GAGACCTGTGTGACCGACTACTGTGAGAGCCCACTTGATATCCCGAGTGGAGTCTGTGAC 1914  
 Db 1861 GAGACCTGTGTGACCGACTACTGTGAGAGCCCACTTGATATCCCGAGTGGAGTCTGTGAC 1920  
 QY 1915 ACCCCCCCTGTGTGAGAGTGTGTGACCACTGTGAGAGAGCCCATATCGGCGCCGAG 1974  
 Db 1921 ACCCCCCCTGTGTGAGAGTGTGTGACCACTGTGAGAGAGCCCATATCGGCGCCGAG 1980  
 QY 1975 ACCCTTACGTGAGAGGCGCGCCCAACCGGAGACCAAGATCCGCGAGCCGCTAGCTG 2034  
 Db 1981 ACCCTTACGTGAGAGGCGCGCCCAACCGGAGACCAAGATCCGCGAGCCGCTAGCTG 2040  
 QY 2035 ACCGACCGGCGCGCGAGAGATGTGAGCTGTGACCGAGACCAACCAAGAGACCGAG 2094  
 Db 2041 ACCGACCGGCGCGCGAGAGATGTGAGCTGTGACCGAGACCAACCAAGAGACCGAG 2100  
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 Db 2161 AGCCAGTACGCGCTGGGACATCATCAGGCCCAAGCCGACAAAGAGAGAGAGCTGTG 2220  
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 Db 2221 AACCAATCATTCGAGAGCTGATCAAGAGAGAGAGTGTACCTGAGCTGTGCTGCGCC 2280  
 QY 2275 CACAAGGGCATTCGGCGGCAACGAGAGATGACAGAGTGTGTGAGCAAGGGCATTCGCAAG 2334  
 Db 2281 CACAAGGGCATTCGGCGGCAACGAGAGATGACAGAGTGTGTGAGCAAGGGCATTCGCAAG 2340  
 QY 2335 GTGCTGTCTCTGAGCGGACATCATGCGGACATCGTGTACCAAGTATGACAGACCTG 2394  
 Db 2341 GTGCTGTCTCTGAGCGGACATCATGCGGACATCGTGTACCAAGTATGACAGACCTG 2400  
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RESULT 15  
 US-10-241-009-30  
 / Sequence 30, Application US/10241009  
 / Publication No. US20030170614A1  
 / GENERAL INFORMATION:  
 / APPLICANT: BARNETT, Susan  
 / APPLICANT: LIAH, Ying  
 / TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE B  
 / FILE REFERENCE: 2300-1621 21  
 / CURRENT APPLICATION NUMBER: US/10/241, 009  
 / NUMBER OF SEQ ID NOS: 68  
 / SOFTWARE: PatentIn Ver. 2.0  
 / SEQ ID NO 30  
 / LENGTH: 2460  
 / TYPE: DNA  
 / ORGANISM: Artificial Sequence  
 / FEATURE:  
 / OTHER INFORMATION: Description of Artificial Sequence:  
 / OTHER INFORMATION: p2Pol.opt.yymm.sf2  
 US-10-241-009-30

Query Match Best Local Similarity 86.9%; Score 2136; DB 12; Length 2460;  
 Matches 2280; Conservative 0; Mismatches 165; Indels 15; Gaps 3;  
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 QY 124 ATGCGCGCAACTGCG 183  
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 QY 412 ATCAAGTGTGCG 471  
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 QY 472 CTGAGAGATGAGCTGCG 531  
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 QY 532 TTCTATTAAGTGTGCG 591  
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 Db 601 GGCACCGTGTGATGCG 660  
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 Db 661 ATGAGCTGACCCCTGAACTTCCCATCAAGCCCATCAAGCCCATCAAGCCCATCAAGCC 720  
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 Db 721 CCGGCGATGAGAGCG 780  
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 Db 841 AACCCCTCAACACCCCGCGTTCGCCCATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAG 900  
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 Db 961 ATCCCGCGACCG 1020  
 QY 1012 GCTTACTTCAAGGTGCG 1071  
 Db 1021 GCTTACTTCAAGGTGCG 1080  
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DB 1321 ACCCCGACACAGAGACCAAGAGAGCCCTTCTCTGCCCATCGAGCTGACCCCGAC 1380  
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DB 1381 AAGTGGACCGGTGACGCCATCATCTGCTGCCGAGAGAGACAGCTGGACCGGTGAACGACATC 1440  
QY 1432 CAGAACTGTGTGGCAAGCTGAACTGGGCGACGCCAGATCTACCCCGGCGCATCAAGGTGCGC 1491  
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DB 1741 CGCGGGCGCCACACCAACAGCTGAAGCAGCTGACCGAGCCGTGAGAGAGGTGAGCAAC 1800  
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DB 2161 GACAGCCAGTACGCCCTGGGCGATCATCCAGGCCCGGAGAGAGCGAGAGCGAGCTG 2220

QY 2212 GTGAACGAGATCATCGAGCAGCTGATCAGAAAGAGAGGTGTACTGAGCTGGTGCCC 2271  
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QY 2272 GCCCAACAGGGCATCGGCGGCAACGAGCAGATCGACAAAGCTGGTGAGCAAGGGCATCCGC 2331  
DB 2281 GCCCAACAGGGCATCGGCGGCAACGAGCAGGTGGACAAAGCTGGTGAGCGCCGGCATCCGC 2340  
QY 2332 AAGTGTCTTCTTGGACGCGCATCGATGGCGGCAATCGTGATCTACCAAGTACATGAGACGAC 2391  
DB 2341 AAGTGTCTTCTTGAACGCGCATCGATGGCGGCAATCGTGATCTACCAAGTACATGAGACGAC 2400  
QY 2392 CTGTACGTGGCAGCGCGGCCCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 2451  
DB 2401 CTGTACGTGGCAGCGCGGCCCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 2460

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